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☞The names of contributors are printed in SMALL CAPITALS; subjects treated, in ordinary type; titles of books reviewed, in *italics*

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EDUCATIONAL REVIEW

JUNE, 1895

I

PHILOSOPHY IN THE UNITED STATES[1]

It is an accepted principle that the philosophy of a people is conditioned by the culture of the people. It is also evident that the question of culture is itself dependent on manifold conditions, among which even material circumstances play their part. It is, therefore, an entirely intelligible phenomenon that hitherto the United States has made but little contribution to the fund of philosophical knowledge. A nation must live before it can think. So our forefathers had to clear the ground and settle the country; so, later, they had to war for their existence and freedom as a nation; so, once more, within our own times, the question of slavery had to be fought through to its solution in blood; so, even yet, we are confronted by momentous issues in the spheres of government and of life which deduct from the sum of forces that can be devoted to abstract thought. It must not be imagined, however, because the United States has been relatively barren of productive work in philosophy, that philosophical interests have received no attention. On the contrary, there were many reasons which led the early Americans, amid their struggles with nature or with man, to turn from external phenomena to the questions of the inner life. They were, in large part, of the sturdy Anglo-Saxon stock, which makes up for its poverty of speculative endowment by its abiding devotion to the problems of practical philosophy and the philosophy of religion. They had in many cases migrated hither to seek religious liberty or to found free political commonwealths; as they multiplied and grew, they came face to face with new questions in political and religious life, which, like those they had left behind, could not be settled without appeal to ultimate principles. The people, also, from the first was pervaded by a deep interest in education. Several of our foremost universities date back to the period before we were a nation at all; and if the philosophical instruction in them was of a meager sort, the soil at least was preparing from which a larger growth might spring.

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[1] Revised and enlarged from a paper by the writer in the *Zeitschrift für Philosophie*, Bd. 105.

Conditions such as these have determined, further, the direction which philosophy in the United States has taken. Lacking the prerequisites for original construction and conscious of our origin in the races of the Old World, we have turned for the chief content of our thinking to the philosophies of Europe. At first, as was natural, the staple of our thought was taken from British writers: Locke and Berkeley, Hume and the Associationalists, the anti-skepticism of the Scottish school, have profoundly influenced speculation on its theoretical side, just as the leaders in the Deistic controversy and the moralists of the eighteenth century contributed to our discussions in religion and ethics. Not that American thinking has been mere slavish imitation; it is rather true that, in our independence, the thread of historic continuity has been often lost or forgotten: but we have generally discussed our chosen problems from the standpoint of principles wrought out elsewhere. After the English thinking we came into contact with the French, especially through the alliance with France during the Revolutionary war, and the regard for all things French which resulted from it, as well as because of the likeness in political ideas on which in part it rested. Later still, German speculation has come in to play its foremost part in the development of our own. Yet never, amid the adoption of ideas from thinkers who do not use the English tongue, have we lost the characteristics of our Anglo-Saxon ancestry, and the influence of British philosophy has continued potent among us.

To the interest of the people in theology, again, has been due a dominant tendency in thought, as well as the fact, in large measure, that we have had any philosophy at all. Thus Edwards, at once the first and the greatest of American philosophers, found the motives to his speculative activity in his devotion to theological questions; his famous *Treatise on the Will* itself being designed to answer objections raised against the Calvinistic divinity. And as with Edwards so with his successors. The intellectual life of New England—and New England long stood for the nation in matters of thought—centered about religious subjects; and the discussions of mental phenomena, or of the deeper philosophical questions, which went on, were prosecuted for the most part in connection with doctrinal theology. If one looks over the list of the earlier students of metaphysics in America, he will be surprised to find how many of them were from out the ranks of the clergy; divines wrote metaphysical compendiums and our philosophical text-books not infrequently emanated from theological professors—in fact, although our native independence of spirit and the absence of an established church made the supremacy less complete than it would otherwise have been, the trend of speculation was controlled by dogmatic convictions. It is to be noted, however, that this intimate relation of theology and philosophy has been one chief agent in the introduction of the American mind to the whole circle of philosophic thought; for here, as always, religious speculation has led to the heart of the metaphysical problem, and our theologians, in endeavoring to master the thought of the world on their special themes, have opened up outlooks into other fields as well. Thus, for example, ethical philosophy has owed much to the discussions of conscience, virtue, and freedom suggested by the theories of sin and redemption; thus, again, the students who crossed the sea to sit at the feet of Schleiermacher or Tholuck or Gesenius or Neander were the forerunners of that great body of younger scholars who have brought back from the Fatherland information alike concerning German culture and concerning German speculation at large.

At present philosophical thought in the United States is becoming more widely diffused and more independent. It is now about a generation since the close of the Civil War, and during that time the conditions favorable to philosophical progress have multiplied among us. The country has grown enormously in material wealth, creating the possibility of intellectual leisure and a more numerous learned class; constantly increasing intercourse with foreign lands and old-world culture has brought us into closer touch with thought beyond the limits of the national domain; education has advanced with gigantic strides; inquiry has in all departments become more free; and the national life as a whole, as we become an older people, broadens and deepens beyond the consciousness of youth. Thus it is that recent years have witnessed a marked development of philosophical activity, a development nowhere more marked than in the universities themselves. Philosophy, which once formed a subordinate element in the curriculum, now takes its place on an equal footing with the rest; while, in several of our largest institutions, splendid financial endowments have made possible the foundation of "philosophical departments," or "schools," which in some cases rival, in their opportunities for philosophical training, the best establishments of Europe. The question, however, whether the time has come for the birth of an "American" philosophy, which shall make original contribution to the thought of the race by the speculative adaptation of whatever distinctive elements have been developed in the national life and history—may for the present be left without a definite answer. There are those among us who are eagerly looking for such a result, some, indeed, ready to labor that the new thinking shall take on the form of this or that particular philosophical theory; there are friends in foreign lands, who, regarding us with not unkindly eyes, look for some notable addition from us to the thought-systems of the world as well as to its political and social history. But though we are older than once we were, we are still young among the nations of the world, and it is becoming that youth be modest. Perhaps our eager energy will some day soon lead us into new and characteristic fields of speculation; more probably a time of earnest work and growth must intervene, before our life and civilization shall find their interpretation in terms of ultimate symbols.

Meanwhile, if we consider the actual condition of philosophy, attention must once more be turned to the historical sources. A generation or two ago, the philosophy presented to the minds of students in the universities was usually a choice between different phases of English thinking as developed in the eighteenth century, and revived or continued in the nineteenth. Locke was studied (perhaps in conjunction with the criticisms of Cousin); or some form of the Scottish philosophy—in the spirit of Reid, it might be, or of Stewart or Hamilton—was contrasted with the skepticism of Hume or the empiricism of J. S. Mill; or, perhaps, the nascent appreciation of Kant led to a partial study of his system in its connection with the movement of thought in the last century, and as the culmination of the course in the history of opinion. In it all, moreover, flourished the conviction that philosophy is essentially a kind of major psychology; that its two divisions, following the time-honored analysis, are "mental science," based on the psychology of the intellect, and "moral science," dependent on the investigation of the conscience and the practical nature. These empirical tendencies continue, in fact, down to the present time. There is something especially congenial to our taste in psychological investigation, as there always has been to the English-speaking race. And if we are now advancing to a more profound conception of the real meaning of philosophy, the native instinct is still to be discerned in the welcome which we have extended to the newer psychological researches.

By such a history and training, the foundation was laid for a widespread interest in the scientific and agnostic tendencies of the later philosophy in Britain. If the alternative in the last generation was between intuitionalism and empiricism, in the later decades evolution—Darwinian and Spencerian alike—has often been in the forefront of the intellectual movement. The works of Spencer, especially, have had a wide currency among thinking men. For, is he not, as Darwin said, "our philosopher," the coryphæus of the modern scientific philosophy? And to minds whose metaphysical training is of a less extensive kind, the first part of the *First Principles*, with its agnostic doctrine of the Absolute, has seemed as evidently conclusive as the thought of the remaining volumes is brilliant and bold. For it must be remembered that Spencer's is probably the greatest constructive genius that Britain has produced—and that world-systems are, as native products, less familiar to the English and American than to the continental peoples. Hence we have been more dazzled by the Spencerian theory than we might otherwise have been. It is a notable fact, however, that Spencer's followers in the United States have more often been unprofessional students of philosophy than those who make metaphysics their life-work. Natural scientists have been well-disposed toward the new doctrine, as was to be expected; and men of popular culture, physicians and lawyers, for instance; but it has gained relatively few adherents among philosophical thinkers by profession. It may, also, be added that the popularity of the system has passed its culmination. Evolution in the organic sphere has been accepted and articulated, in large measure, into our views of the world and of life; the general idea of development as a world law has also profoundly affected recent movements in opinion, and more than one of Spencer's principles is bearing fruit in special departments of thought. But his cosmical theory as a system, especially the agnostic preamble on which it is based, is more and more exposed to criticism—and this no longer of a merely dogmatico-polemic, but of a strictly philosophical type—as time goes on and we become better acquainted with the systems of other and deeper thinkers.

The influence of Teutonic speculation came later in our history. Before the era of steamships and other modern means of communication, it has been said, it took ideas a generation to travel from Germany to America; and whatever be the truth in this somewhat unflattering dictum, it was certainly a considerable time before we felt the power of the Kantian and the great post-Kantian systems.[2] At first these came to us, moreover, in somewhat mutilated form, brought in by literary and theological writers rather than by direct philosophical channels, mediated by English litterateurs, as Coleridge or Carlyle, or by the French eclectics, as Cousin. The earlier results again were not always purely philosophical; for example, the idealistic elements in the transcendentalism of New England, notwithstanding the nobility of its standpoint, and the literary excellence of the form in which it was cast, in spite also of its significance for the intellectual and moral culture of the people, were appropriated rather by the insight of genius than as deductions of the abstract reason. The transcendental doctrines were intuitions rather than philosophemes. And yet it must be remembered that the acquaintance with Teutonic thinking which sprang from literary or practical sources such as these, not infrequently passed over into a genuinely philosophical interest in the great leaders of nineteenth-century speculation.

A second preparation for the more definite understanding of the German philosophy of the age was made when, to our traditional curriculum based on British thinkers and the Continental writers of the seventeenth and eighteenth centuries, we added the study of Kant already referred to (p. 5), and in time that of the work of Kant's successors. This with us, as with the English, was at first, no doubt, of an imperfect sort. Though we were convinced of the leading position of the great Königsberger in the line of modern development, it is yet to be feared that, when we introduced his system into our scanty philosophical courses or pondered his writings for private enlightenment, we were far from realizing his true importance, and farther still from a due valuation of the systems to which his own had led. But at least it was a basis, though an imperfect one, for the fuller appreciation of the later movements in thought; and now, in recent decades, this has flowed in upon us in an ever broadening stream. The cause is in part to be sought in theological interests, of late so intimately connected with idealistic tendencies; in part, it has been the direct acquaintance with the masters, studied often in their own home on the soil of the Fatherland; in part, the influence of the neo-Kantian and neo-Hegelian developments in Britain; in part, the antagonism shared with the last mentioned to the empirical and agnostico-evolutionistic systems. Thus the *Journal of Speculative Philosophy* (founded 1867), and the efforts of its distinguished editor, created a focus of philosophical activity in St. Louis, a city for its energy and growth counted so typical of our restless "materialistic" civilization. Thus in several of our universities and other intellectual centers—from Cambridge to the Californian coast, and beyond our own borders in Canada, where the influence of Oxford and Glasgow has been vividly experienced—are to be found vigorous exponents of the newer idealism in one or other of its various phases. Just how great the force of this movement in the future will be, and just what forms it will assume, cannot be predicted. We are but entering on the age of construction here as in philosophy at large, and the movement, with us even more than elsewhere, is a general conviction in the minds of its adherents rather than a definitely completed system. But it is beyond question that we are sharing deeply in the wave of idealistic thinking which has recently passed over the English-speaking world, and that we are to continue to feel its power in the days which lie immediately before us.

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[2] Porter (Ueberweg's *History of Philosophy*, ii. 453) has dated the beginning at 1829, when Marsh published his introduction to Coleridge's *Aids to Reflection.*

Of the post-Hegelian systems the United States has been most hospitable to the philosophy of Lotze. By nature unresponsive to pessimistic and materialistic suggestions and not yet sensitive to the minor currents of thought at a distance, we have remained unmoved by many of the changes of opinion in Germany during the period from 1840 to 1870. But Lotze's reconciliation of scientific and ideal interests, and his positive doctrine in ethics and the philosophy of religion, have met with a sympathetic reception; so that it is not too much to say that a considerable number of those who in the past would have turned to the anti-skeptical elements in British thinking for a basis of belief and morals now look with favor, if not with entire agreement, on the views of this gifted and lamented writer.

Attractive to us in Lotze, further, has been his psychological position; for there is no more prominent feature of our recent development and our present condition than our devotion to the newer methods of attacking psychological questions. In fact the "new" psychology claimed our attention relatively early in its progress, and soon secured widespread favor among us, while it now holds a place both in the universities and before the public, which not a few thinkers in the land of its origin would deem out of proportion to its intrinsic worth.[3] Moreover, we have not only turned to this latest-born department of science with marked preference, but it is the field in which, perhaps, the most valuable of our recent work has been done. For if Leipsic was the home of the new discipline, many of its pioneers in the United States were among the first from non-German lands to avail themselves of the then unique opportunities which Leipsic offered; and if, in all the divisions of the philosophical field, we owe so much to foreign scholars, here at least we have begun to make return for the debt, and this, both by way of positive research and by way of theoretical interpretation. The effect of this movement on philosophy proper, it is more difficult to forecast. That one result is to be a new impulse to empirical tendencies, is, indeed, already apparent; as, also, that the confidence so common in the exponents of a new science has in some cases bred a relative underestimation of the deeper problems and a neglect of more fundamental solutions than those which their favorite discipline is fitted to supply. It is also true that the physiological and experimental investigation of mental facts has led a few thinkers to points of view which may fairly be termed materialistic. But that the systematic materialism which in some quarters has been feared will be the outcome, seems far from evident. For the more clear the differentiation of empirical psychology and philosophy becomes, the more clear it also grows that its conclusions, like those of the other particular sciences, are susceptible of various metempirical interpretations; while, concretely, the transition from the "old" psychology to the "new," in this phase of it, is characterized not so much by a denial of the distinction between physical and psychical phenomena as by a change of position in regard to the existence and the nature of the subject of mental states, and its significance for purposes of scientific explanation.

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[3] See Delabarre, *Année Psychologique*, 1895; Hall, *Proceedings of American Antiquarian Society*, vol. ix., Part II., pp. 137–74. There are now in the United States twenty-seven laboratories, more than in all Germany, and some of them better equipped than any elsewhere.

Among the latest indications of increasing interest in philosophical pursuits, is the beginning of the study of the philosophy of education. This has been conditioned by the progress of education itself to which reference has been made (p. 4) and the emergence of problems not to be settled, even by practical instructors, apart from theoretical considerations. Prominent among its results has been the attention of teachers to the principles of their own profession. Hence have sprung associations—local, state, and national—for purposes of mutual acquaintance and the discussion of pedagogical questions; with, as a most recent and specially important work, the formation of representative committees to report on subjects the proper treatment of which demands the continued labor of many expert minds. In the case of not a few educators, again, the devotion to pedagogics has followed the channel of some definite philosophical school or system. Thus there is an active and successful band of Herbartians, in 1892 organized into the Herbart Club. This "consists for the most part of teachers who have made a special study of Herbartian principles of education," and aims "to facilitate the spread of these ideas, and to promote their rational application in school work under American and English conditions."[4] More widespread still is the movement which seeks a rational basis for instruc-

[4] See De Garmo, *Herbart and the Herbartians*, 1895, p. 205.

tion in the results of the newer psychological researches. For the new psychologists have not confined their endeavors to the theoretical investigation of mental phenomena, but in many quarters are making application of their work to the needs of the young and the guidance of school life. In this way "child-study," "educational psychology," and the like have become favorite fields of inquiry as well as prolific subjects of discussion. Amid these many lines of work there is no doubt much that is crude and not a little that in the end may prove erroneous, but no one who earnestly considers the facts can fail to discern marked signs of promise for the future. In the past, our educational system has enjoyed popular favor and has manifested a vigorous, if not always a successful, development; in the future it will add to these the benefit of intelligent direction based upon principles.

In fine, philosophy in the United States is experiencing a new birth. It has escaped from its traditional and inherited trammels, it is advancing with noticeable energy in many directions. So far it has little to show of an original or constructive character; but there are unmistakable indications of a philosophical activity such as the nation has never known before and of the approach of a new and more profound era in our intellectual life. Whether we look at our catholic acquaintance with the thought of other lands and our catholic appreciation of it; or have regard to the increase of opportunities for the study of philosophy and the growing philosophical interest; or consider the rapid multiplication of journals,[5] devoted to psychology, philosophy, and cognate departments; or think of the frequent issue of philosophical works—translations, dissertations, original treatises—from the press; it is plain that, both in respect of instruction and of sympathy, the future of philosophy among us is secure.

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[5] *The American Journal of Psychology* (1887); *The International Journal of Ethics* (1890); *The Monist* (1890); *The Educational Review* (1891); *The Pedagogical Seminary* (1891); *The Philosophical Review* (1892); *The Psychological Review* (1894).

II

ELECTIVES IN ELEMENTARY SCHOOLS

All schools below the college may be called elementary, and may be classified as primary or secondary.

The primary school is naturally concerned with the fundamentals of education, those rudiments of knowledge that are essential in every condition and pursuit of life. The curriculum of a primary school may, therefore, contain four groups of subjects:

1. Language study, including oral and written speech, which is a necessary means to all educational ends. 2. Literature and history, whose ultimate aim is ethical, and which reveal to the child his own nature and the character of his relations to society. 3. Science, comprising the elements of geography, physiology, and one or more of the so-called nature studies; all of which have to do with man as related to his environment, and afford the best opportunities for training the child's power to make observations, comparisons, and generalizations. 4. Arithmetic, restricted to those principles and processes that are applicable to the common affairs of life.

To these may be added, as subsidiary subjects, music and drawing: the one, because it cultivates and refines the feelings; the other, because a quick perception of right forms and relations enters into every important act of a well-ordered life.

This curriculum, when properly correlated in its parts and limited in its content, ought to be completed at a comparatively early age. I venture the opinion that the child of fair ability should reach the secondary school, or begin his secondary studies in a grammar school, two or three years earlier than is customary nowadays. Such evidence as I have been able to gather from time to time goes to show that the average grammar school boy progresses too slowly. Like McClellan in the peninsular campaign, he is working in the trenches instead of winning victories. Precious hours are squandered in needless repetitions and reviews, in an absurd zeal for thoroughness, and, as Dr. Hall says, in analyzing things that never ought to be analyzed. The power of children to meet the demands of a well-conditioned school seems to be underrated. More fresh work and more real difficulties would not only strengthen the mental fiber of the child, and make him a more aggressive scholar, but would kindle a new interest in his studies and fill his heart with genuine delight.

Furthermore, many of the topics studied in the upper grades of the grammar school are not fundamental in education. They are unessential not only for the boy who is to be liberally educated, but also for him who is never to enter the secondary school. The subject matter of these topics is often obtained from cyclopedias and books of reference, and should be classed as information, some of which is interesting, much of which has little, if any, value as a means of education. This is notably true in respect to geography; and, if Sir William Hamilton is correct in his view of the value of the discipline that comes from training in mathematics, a considerable part of the time now devoted to arithmetic in our primary and grammar schools could be much better spent in the study of language or elementary science.

So, too, while admitting that the imagination of the child in the primary school should be stimulated and strengthened by the interesting events and thrilling stories of mythology and history, we can believe that the scientific study of history and the attempt to grapple with the philosophy of constitutional government may wisely be deferred until the child is well advanced in the secondary course of his education.

Nor is the reasoning by which the prevailing system is pronounced defective wholly of an *a priori* character. Careful observations in respect to several hundred pupils, made under favorable conditions from the standpoint of a teacher in the high school, tend to confirm the theory that has just been stated. Boys and girls who begin their secondary education at the age of fifteen have not only failed to receive that good measure of systematic and vigorous training to which they are fairly entitled; but, in many cases, they have become so nauseated with the minutiæ of primary studies that they have no relish for further efforts in education. The nerve of their ambition has become paralyzed by inanition.

Furthermore, there is no little evidence that youths fifteen or sixteen years old have less power to acquire the paradigms, vocabularies, and idioms of foreign languages, and to make careful and accurate observations in science, than they had at an earlier age. They have passed out of the period in which they are content to conceive things as units and independent of their relations, and have entered upon that stage of development in which, as Dr. Harris says, they instinctively look upon "everything as relative and dependent upon something essentially connected with it." The golden opportunity for acquiring those elements of knowledge which are the tools of the student and scholar, is, in many cases, gone by. Such girls and boys,—and their name is legion,—even if they attempt the studies of the secondary school, find this elementary work in language, science, and mathematics so distasteful and so unsuited to them, in their advanced stage of untrained maturity, that they soon abandon the school and assume the duties of a life for which the school has given them a comparatively poor preparation. Likewise those who persist in their education are seriously handicapped in the race of life, both by pursuing an abnormal and ill-arranged course of studies and by graduating from the high school or college two or three years later than is needful or natural.

To summarize, if we would put an end to dawdling in the lower schools, and assume that boys and girls have brains, and that under normal conditions they like to exercise them; and throwing overboard the unessentials, condense and rearrange the curriculum of these schools, it would not be unreasonable to believe that the child of good ability would be ready to begin the work of secondary education two or three years earlier than is now customary in many public schools of New England.

At this point uniformity in the curriculum should end and diversity begin. There would then be three classes of pupils instead of two, as at present, to enter upon the privileges of secondary education: (1) Those who now end their school life in the grammar school, (2) those who take a part or all of the high school curriculum, and (3) those who prepare for some college or scientific school.

To each of these three classes of pupils the State may wisely offer a specially devised, though not a separate, programme of studies, in each of which there may be several electives.

Such diversity would be advantageous both to the individual and the State. Children, as well as adults, differ so widely in their mental characteristics and natural aptitudes that the best results to the individual cannot be attained if this unlikeness is not recognized by the school. To compel a child to pursue a line of study to which his mind is unsuited and for which he has a natural aversion, is to blight his ambition and to narrow the boundaries of his achievement. To limit a man's productive or directive power is to inflict a loss upon him and the State.

This diversity in the native gifts of children is fast gaining practical recognition. Several towns and cities of Massachusetts have already introduced Latin as an elective into the grammar schools. Others have admitted French or German on the same terms. The Conference on Modern Languages advised the Committee of Ten to place "elective German or French" in the fifth year of the programme of the elementary school.

Our present uniform system of instruction in the grammar schools does not meet the wants of any one of the three classes of pupils found in those schools. A boy cannot commence his preparation for college until he is nearly fifteen years old; he who goes through, but not beyond, the high school, completes an unsatisfactory and comparatively superficial school education at the age of nineteen; and, worst of all, the ninety-three per cent. who never enter the high school leave the grammar school with a mental equipment in no way superior, as far as the school is concerned, to the French or German boy of twelve or thirteen.

This third class suffers the most from the present arrangement both because of its greater number (ninety-three per cent. in Massachusetts) and because it has little opportunity to supply the deficiency by subsequent study. They above all others need to devote their school days, not primarily to the gaining of interesting information, but to the acquisition of such principles of language, literature, history, science, and mathematics as shall furnish them the means with which to extend their learning by general reading in after-life.

A special programme of studies should therefore be organized for such pupils, and opened to them as soon as they complete the primary curriculum outlined above. This course of studies would be three or four years in length, and might include a generous course in the English language, literature, and composition; a substantial outline of the history of the English-speaking nations, with special reference to the rise and growth of constitutional government; laboratory courses in physics and chemistry; elementary courses in algebra and geometry; and, as electives under reasonable restrictions, a foreign language, commercial arithmetic, commercial law, bookkeeping, mechanical drawing, and manual training.

In comparing a programme of study like this with the one pursued in the last three or four years of the grammar school as it is organized to-day, we come face to face with one of the most pressing school questions of the time. We cannot demand the reorganization of the grammar schools in the interests of the seven per cent. who enter the high school, or the one per cent. who go to college; but if it can be shown from the history of education, and the experience of European nations, that a more extensive and intensive plan of studies is both practicable, and also more productive of sound training and genuine culture for the ninety-three per cent. who do not go beyond the grammar school, then the reorganization should be made.

It now remains to be seen how far the elective system can be carried in formulating a course of study for the seven per cent. who enter the high school. A curriculum for this class of pupils would cover a period of five or six years, and therefore, under our present system of organization, would begin in the grammar school. It should be comprehensive enough, in the case of a public secondary school in a populous community, to include all subjects required for admission to the best colleges, and such other subjects as may be deemed essential for culture to those who do not continue their study in the college.

The advantages of a single but broad course of studies for the two classes of pupils found in public high schools are, at least, worthy of careful consideration. It is in most cases less expensive than several separate curricula; it brings the two classes of pupils into intimate relations with each other in the classroom, often to their mutual benefit; its enlarged list of subjects enables the school more easily to meet the various requirements of the several colleges and scientific schools; it encourages diversity of preparation for the colleges that admit students in several different ways; it insures a larger number of well-taught subjects that may be offered as electives to those not preparing for college; it stimulates the instruction since it is to be tested by a college entrance examination; and finally, as the subjects of study of the two classes of students approach identity, the probability increases that larger numbers will catch the spirit of the school, and be inspired to continue their education in the college or scientific school. If the colleges adopt as their requirements for admission the four sample programmes of studies proposed by the Committee of Ten, we may expect to see some large public high schools combine the four curricula into one comprehensive scheme of required and elective subjects, which shall meet the wants of all classes of pupils.

For my own part, I find no difficulty in entertaining the theory that the ideal curriculum, for the boy who does not expect to go beyond the secondary school, may afford a very satisfactory preparation for a continuance of study in some higher institution of learning. The instruction and training given to girls and boys preparing for college are in general the best that the school can devise, and, as such, are not too good for their less fortunate or less ambitious brothers and sisters who do not aspire to a higher education.

A curriculum designed primarily for the six per cent. who do not go beyond the high school, and secondarily for the one per cent. who prepare for college, naturally comprises two classes of subjects: required studies and electives.

Following the lines of distinction already laid down, the required studies would be the English language, literature, and composition, history, physics, and chemistry, and the elements of algebra and geometry. An intimate acquaintance with these subjects seems to be essential to the general intelligence and moral well-being of the individual, and the security of the state.

In practical importance no subject can transcend the English language. To give a boy the power to express his thought with ease and grace by tongue and pen, is one of the greatest boons that the school can bestow upon him. The study of literature touches the child's spiritual life and brings his mind to the contemplation of subjects that are profoundly ethical and philosophical. From it come clearer thought, finer feelings, and stronger impulses to make such choices as shall insure purity of heart and rectitude of life.

Some knowledge of history is also needful for an intelligent citizen of a free state. Through it the youth gains breadth of vision and fullness of sympathy. He comes to honor and love the life of the nation as he learns the cost of liberty. The institutions of civilization become more precious in his eyes as he recounts the struggles and sacrifices incident to their rise, growth, and preservation.

This course in language, literature, and history, in which all pupils unite, should be outlined with the greatest care and skill. Beginning with the primary and extending through the secondary school, it should command the best efforts of the ablest teachers. Whatever we do, or do not do, in education, we must not forget the injunction of the wise man, who said: "Wisdom is the principal thing; therefore, get wisdom; and with all thy getting get understanding." In this way only can the schools meet the demands of those men who rightly insist that, "the greatest forces of this, as of all generations, are faith, and hope, and love."

Next in importance to the English language and literature, and history, are the sciences. The current of modern life sets so strong toward scientific pursuits, an elementary knowledge of the phenomena of physical forces is so needful in these days, and the power to reason by induction, which is cultivated in the laboratory, is so effective in every pursuit of life, that it is not wide of the mark to say that the study of science has come to be indispensable in an ideal education.

And yet, if this be true, it is hard to see why so many of the colleges still admit students who have had no training whatever in the study of physical science. Such a course of procedure on the part of the colleges seems to a layman abnormal and indefensible, and increases the difficulty of preparing girls and boys for college in the public high schools. If successful training in some of the sciences could be regarded as an equivalent of some of the present requirements for admission to college, this embarrassment would be removed and the number entering college from such schools might be increased. But, be this as it may, the secondary schools must give some share of their attention to instruction in physical science, rating it as second in value only to the group of humanistic studies—English, literature, and history. To what *extent* the study of science should be prescribed for all pupils may be difficult to determine; but we would all agree, perhaps, that every graduate of a secondary school should have at least an elementary knowledge of physics and chemistry.

It may be wise also to insist that all graduates of the secondary school shall have a knowledge of the elements of algebra and geometry; but, if this requirement is insisted upon too rigidly, not a few will be debarred from the privileges of the high school who otherwise would be greatly benefited by it.

So much for the required subjects; a word now about the electives. Have we not reached that point in the evolution of the secondary school where all the subjects in the curriculum, not included in the list of required subjects just mentioned, should be classed as electives? As it seems to me, we must adopt some such scheme of electives as this, or construct a programme of studies that shall be rigid and uniform.

To pursue the latter course is to assume that the differences between men lie in their education; that no one of the selected subjects in the traditional curriculum is by nature unsuited to the normal training of a child; that the study which he in his depravity most dislikes is the one that he most needs; that those who cannot thrive under this hard and fast ideal curriculum are not worthy to be educated in the secondary school; and that the State cannot entertain the theory, even incidentally, that children should be trained in school for different pursuits in life.

The advocates of the elective system, however, seriously question or even deny the truth of these five assumptions. They affirm that children are unlike in the mental characteristics which they inherit; that a rigid and uniform curriculum cannot meet the natural needs of our heterogeneous population; that in so far as we compel a child to study a subject that he instinctively dislikes and in which he cannot succeed, we stimulate his aversion to intellectual pursuits; that those who can master the sciences but not the languages, or the languages but not mathematics, are as much entitled to the fostering care of the State in their education as those who can become adepts in all three—science, language, and mathematics; and that the interests of the State are as much concerned in training a boy to earn an honest living as in teaching him to be a linguist or a professional man.

John Locke had somewhat the same notion when he said:

"The mind has sympathies and antipathies as well as the body; it has a natural preference often of one study before another. Generally it is better to follow the bent and tendency of the mind itself, so long as it keeps within the bounds of our proper business, wherein there is generally latitude enough. By this means we shall go not only a great deal faster, and hold out a great deal longer, but the discovery we shall make will be a great deal clearer and make deeper impressions on our minds. The inclination of the mind is as the palate to the stomach. That seldom digests well in the stomach, or adds much strength to the body, that nauseates the palate."

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Other articles on the scope and practical working of the elective system of study have appeared in the EDUCATIONAL REVIEW, as follows:

Results under an elective system, by Professor Richard G. Boone (June and September, 1892); Electives in the high school, by Principal Edward J. Goodwin (February, 1893).

III

THE NEED OF GEOGRAPHY IN THE UNIVERSITY

Geography should have a place in the list of studies of our colleges and universities because the recognition implied in giving it a place is an essential part of the round of attentions that the subject deserves. At present there is nearly everywhere a break between the work on the elementary, ordinary, and rather old-fashioned geography of the schools, and the work of the investigating and professional geographer in his explorations or other advanced studies. In consequence of this break, the general subject of geography is not advancing as so important a subject ought to advance.

As a result of the break between school geography and professional geography, our professional geographers are all self-made men. They have had to bridge over the gap from their school studies to their professional labors in such ways as they could best devise. They have consequently had to begin their higher work with preparation inferior to that which they should have had; and they have generally concluded it without coming personally or through their writings in close contact with our teachers of geography, who, of all persons in the community, should be most promptly supplied with everything which is new concerning their subject. The break in the study and development of the subject is therefore both in the ascending and descending order of educational attentions, and this I shall now endeavor to show more fully.

It is not a little curious that a subject of such fundamental importance and wide application should so seldom be regarded as affording material for serious collegiate study. There is, to be sure, not infrequently an elementary course in physical geography announced in college catalogues; but this is in nearly all cases given by men whose first attention is turned to other subjects. The course, as given, can do nothing more than open the study, as a simple elementary course in history or botany might open these attractive subjects. But while the higher study of history and botany is well provided for, opportunity for continued study in geography is seldom allowed; and geographical investigation is hardly known among us.

Perhaps one reason for this unfortunate neglect is the assumption that geography proper is finished in the schools, and that physical geography is completed in the single course that is allowed in the colleges, and that there is therefore no material for further teaching. Judging by the scarcity of geographical text-books of advanced quality in our language, good argument might be made to this conclusion, especially by those professors of other subjects who have the college courses in physical geography in their hands, and who cannot of course be expected to develop or originate higher courses, but only to reproduce the subject about in the form that it is left by others.

Another reason that might be offered for the discontinuance of geographical studies is that geography is properly continued in history and that physical geography finds its later development in geology; but this view cannot be accepted by those who recognize the fullness of geography as a subject in itself, or by those who know how completely the geographical element is subordinated in the usual presentation of history and geology. It might as well be urged that geography is sufficiently continued in zoölogy or botany, because the study of animals and plants involves the study of their distribution over the earth. In order to perceive more clearly this break in the ascending order of attentions, let us briefly trace the position of geography through our educational system.

At first, in the lower classes of the grammar schools, geography is a congeries of subjects including, besides a central body of real geographical material, various side issues about astronomy, physics, mineralogy, geology, zoölogy, botany, history, government, and economics. This is as it should be;

under the broad subject of elementary geography the young scholar naturally makes acquaintance with related subjects that are afterward considered separately. Perhaps the distinguishing mark of the newer order of things in school geography is the increased share of explanatory and rational physiography that it includes, as contrasting with the empirical descriptive geography of earlier methods; and this replacement is a hopeful sign of what must eventually follow, but of which there is as yet not very much indication. A prevailing deficiency of existing elementary methods is the failure to make enough use of the natural illustrations of the subject that abound around all schools in the city and country. There is valiant effort made by many earnest teachers to escape from subjection to the text-book, but the small variety of available elementary literature on geographical subjects makes this effort a difficult one.

In the later grammar-school years geography is generally replaced with history, the natural successor of political geography, for this is only history in its most elementary form. The replacement continues in the high school, and here the various other subjects first encountered under geography are, as a rule, also given individual place—astronomy, physics, physical geography (including meteorology), botany, zoölogy, and occasionally mineralogy and geology; although the last subject is too often unhappily treated by beginning with a book instead of in the field, the natural geological laboratory with which country schools at least are so well provided. As far as physical geography is concerned, the high-school course suffers from lack of illustrative material as well as from the small variety of good books for side reading. Normal schools too often fail to give a clear understanding of the physiographic aspects of geography to their embryonic teachers, because they place so little emphasis on the needed geological basis of the subject, and especially on the field study of geology. They likewise fail to familiarize their students by observation sufficiently with elementary facts about the apparent movement of the sun, the winds, and other commonplace phenomena which are of great educational value in the early stages of geography. As a result, most children learn from a book, and not from the sky, that the sun's noon altitude and the length of the days change with the seasons. This not only teaches the subject badly, but also dulls the child's observation and intelligence by failing to give them a legitimate opportunity for exercise. I believe that in most cases it would be more advantageous to the teacher's future worth to devote less time in normal schools to comparatively abstract philosophical and psychological studies, and more time to subjects that will have an immediate application in school work.

All the branches from elementary geography that are specialized in the high school have more or less recognition in college and university studies, but geography itself has practically none, and physical geography has too little for its needs. Yet who can doubt that the very subjects which constitute the core of school geography are worthy of broader treatment in college, and of investigation in the university. The geography of the grand divisions of the lands is susceptible of expanded collegiate treatment such as it receives at not a few German gymnasia and universities. Economic geography, a consideration of the larger aspects of commercial geography, might be made a most useful collegiate associate of economics. So with physical geography, and especially with the modern aspects of the subject for which many prefer the special name of physiography. Here is a subject, the outgrowth of modern geology, whose educational values are as yet hardly sounded, but whose attractions are everywhere admitted; nevertheless it is seldom allowed adequate recognition by being made the first responsibility of a college professor. Still less frequently is it made the field of investigation in higher university work, although its promise of fruitful return is not exceeded by that of any other of the subjects to which attention is now so generally turned by means of advanced courses, laboratory facilities, and especially prepared teachers. In all this we are not behind the English universities, but we are far behind those of Germany, where professorships in geography are not uncommon.

In another branch of educational ascent the insufficient attention allowed to physical geography is painfully marked. This is in those scientific schools which teach engineering, and whose students furnish the topographical surveyors by whom our national and State surveys are made. So strongly is the attention of the faculties of these schools turned toward the mathematical and technical sides of the instruction that is required as preparation for methods of work employed by the topographer and engineer, that little time is left for the study of the great subject of the topographer's attention; namely, the surface of the earth and the expression of its wonderfully modulated forms. The young men who are graduated from scientific schools and who undertake the responsible task of mapping our country in State and national surveys must, with few exceptions, begin the work with no adequate understanding of the subject they are to work upon, although they may be well instructed as to the use of the level and the plane-table with which they are to work.

There is one phase of this subject of map-making that is not generally understood. It is too commonly supposed that a map is made entirely by measurement; that it is necessarily accurate because the topographer carefully measured the forms of the land before him when the map was made. Now while it occasionally happens that an elaborately measured survey has been made,—as, for example, of the area of Central Park in New York City, for the use of the landscape gardener by whom its natural beauties were so well utilized,—it is practically never the case in this country that a minutely elaborate method is employed on government surveys of large areas. The surveyor fixes by accurate measurement a certain number of points, but between these points he must sketch the intervening space. In sketching, he has to reduce the area of the ground before him to a much smaller area on his map sheet; and he must therefore omit many details and represent only the more important features. The process of selection and omission should involve intelligent and systematic generalization, based upon an appreciation of the meaning of the landscape and on an understanding of the relation of its primary, secondary, and subordinate features. Without such generalization, the map produced is inexpressive, a poor piece of work. If the topographer actually measured every line that he draws, he might be as unintelligent but as faithful as a camera; but he *must* generalize, and to do this he must have an intelligent understanding of this subject—"*l'intelligence du terrain*," as a competent French writer has lately expressed it. But at present the topographer receives only the barest introduction to this division of his life work in the professional school. The instruction that he may have had in physical geography is largely concerned with the larger features of the distribution of land and water and with the greater relief forms of land which he never sees as a whole; and too little concerned with a careful study, classification, and explanation of the more minute land-forms with which he will be chiefly occupied all his life. He therefore goes into the field unprepared for some of his most important duties, and if he ever learns them (some topographers never do), it is only at the expense of many seasons of costly experience. The larger features of the world deserve all the attention that they receive in his education, but their value is chiefly in contributing to the development of his general intelligence, not of his professional skill. The smaller features of land form are not systematically taught in any engineering school in this country, as far as I have been able to learn. Until they are, the topographer will be graduated with one important side of his professional education neglected.

Now, in contrast to the existing condition of geographical teaching, let us briefly consider the ideal sequence of geographical studies from the bottom to the top of the educational system, and sketch out at the same time the ideal equipment necessary for the best work in each step of the ascending scale.

The grammar schools would, as a rule, follow their present plan as to time, but their geographical work would be better done. Great care would be taken to give just ideas, especially at the beginning of the study. More use would be made of outdoor observation of many kinds. A greater share of physiographic work would be introduced, thus emphasizing the rational side of the study and displacing something of the empirical descriptive and political geography that now takes up too much time. The teacher would be expected to have practical knowledge based on manual exercises and field observation of the various practical steps in the education of her scholars; and in every step her experience should have a greater, broader extension than can be expected of the boys and girls in her charge. As to equipment, there would be a great increase in the number of available text-books, manuals, and readers, and, let us hope, a general improvement in their quality as well. We should hope to find every grammar school provided with a good topographical map of its district and a good topographical map of its State, with a well-illustrated text explanatory of the latter and therefore including some account of the former. State maps are already distributed in the schools of New Jersey and Rhode Island; but they are not accompanied by explanatory texts, and their usefulness is therefore greatly decreased. Good models of typical land forms would be of great value, but practically none are now on the market. A good collection of wall maps is essential. Small elementary globes for hand study by each scholar are of great importance, not so much for teaching what used to be called "the use of the globes," but for implanting correct introductory ideas of the forms and distribution of land and water. In the private libraries of those teachers who felt a special fondness for this division of their work, we should expect to see maps and texts upon adjacent States. There should be, if possible, a projecting lantern, and a general collection of geographical lantern slides,[1] and some of the governmental maps of the kind referred to below. Current weather maps should be accessible during part of the year at least, and simple meteorological records should be made to serve as the foundation of later systematic study. Besides the thermometer usually kept in the schoolroom for hygienic purposes, another should be provided for outdoor observations.

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[1] A provisional list of this kind has been prepared by the author and published in the Report of the Superintendent of Schools, Cambridge, Mass., for 1893. Reprints from the Report, under the title *List of geographical lantern slides*, may be had of the Publication Agent, Harvard University, Cambridge, Mass., for ten cents. The slides may be purchased of E. E. Howell, 612 Seventeenth Street, N. W., Washington, D. C.

In the ideal high-school course, the geographical basis of history, zoölogy, and botany should be carefully presented whenever those subjects are taught. Physical geography in its more modern form, based on simple geological principles, would replace the more descriptive treatment of the subject now in vogue. Meteorology might well have a half-year to itself; for it is a subject that is capable of most satisfactory use as a mental discipline. The teacher should of course be well versed in all the observational work that is expected of her scholars; and her experience in field study should cover a much wider range than is possible around the school where she teaches. What has already been said of normal schools will indicate something of the changes that seem to me most needed there. The teacher of geography in the normal schools should in every case have good training in geological field-work. Through no other discipline can the necessary command of the subject be acquired.

In the high-school and normal-school libraries, the map collection would include an extended series of wall maps and a whole set of large scale topographical sheets of the State and perhaps of some of the adjacent States, as well as the general maps of the home State and its neighbors, each with its appropriate text. There would also be a selected list of lantern slides, particularly illustrative of the features of the home State. There should be a considerable number of various governmental maps, of which we now have so large a variety procurable at so low a cost, such as the charts of the coast, of the Mississippi river, and of various topographical features like cañons, mesas, bays, deltas, etc., in different parts of the country.[2] These are of great value in giving large-scale illustrations of actual and important geographical features. A collection of well-made models would also be extremely servicable. For supplementary reading, a good journal of school geography is very desirable; a valuable publication of this kind exists in Germany, and we may in time have one in this country. It would be particularly useful in the normal schools and from them would work its way into other schools. The *Geographic Monographs*, now in course of preparation by the National Geographic Society, will be important additions to the school libraries.

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[2] See *Governmental maps for use in schools*, by Messrs. Davis, King, and Collie. Henry Holt & Co., New York, 1894.

Some indication has already been given of the nature of the geographical instruction that is needed in our colleges. The chief characteristics of the desired courses would be that they should build upon the high-school preparation; that they should form the first duties of the professor or professors in charge of them; that they should be thus developed in greater variety and strength and breadth than is now possible; that they should be given not only library collections but laboratory facilities as well, where maps, models, and pictures could be carefully studied. The specific courses most desired are: general physiography; general economic geography; special geography of continental areas, the different sections of the last to be given, if desired, only in successive years. The geographical courses in engineering schools should be in grade, similar to those of the colleges, but in subject they should be more strictly limited to the practical needs of the student. For the topographical engineer, the most serious need is a thorough course in the physiography of the land, based on geology with field work. The chief characteristic of real university work is embraced in the word "opportunity." The opportunity comes partly in association with specialists, who give lectures and hold conferences while carrying on their own investigations; partly in the free use of the university collections; both these opportunities being essential to the vigorous growth of the young geographer. If he looks to physical geography as his chief study, he must be well grounded in geology, always including good field training; if he specializes in economic or commercial geography, a good knowledge of history must be acquired. The associated subjects of meteorology and climatology call for preparation in physics and mathematics. Oceanography, an undeveloped specialty, requires knowledge of mathematics, physics, chemistry, and biology. In any one of these lines of work, the advanced student should always strive to make some original contribution to his subject.

The geographical collections of colleges and universities would of course include practically all that has already been mentioned and in addition a number of the more important geographical journals; Petermann's *Mittheilungen*, the *Geographisches Jahrbuch*, the (London) *Geographical Journal*, the *Scottish Geographical Magazine*, and of course all the important geographical journals published in this country. Books of travel should be well represented in the college library. Furthermore, a series of grouped sheets of foreign topographical surveys, selected for their illustration of special features, will be found of service.[3] Geographical lantern slides and models are also of great value in collegiate as well as in the earlier stages of instruction; such elaborate models as those made by Heim of Zürich would be especially appropriate in college laboratories. University collections, as differing from college collections, should give greater opportunity for original research; and for this purpose, besides an extended collection of geographical literature, a series of topographical maps of various countries is of great service. The expense of such a collection is, however, very great.

I shall not attempt to measure the relative importance of these various geographical courses in college and university, for on that question my testimony would probably be prejudiced; but it may be safely contended that they deserve more attention than they now receive. It is, however, plainly out of the question for all of our colleges and universities to undertake the whole round of geographical studies here outlined and to do equal justice to other subjects at the same time. Even our largest universities fall short of the ideal here indicated, and there is no likelihood that all of them will reach it in any short time. Moreover, educators who are interested in other subjects generally contend that they also need and deserve a fuller attention than they receive. It is not probable that any one institution will be so fortunate as to be able to treat all subjects with the fullness that the specialists in each could desire. The solution of the difficulty is not so likely to be found in enormous endowments as it is in the wise distribution of efforts among neighboring institutions. When several colleges in a single State recognize that they cannot all teach all subjects, they may perhaps agree to develop individually, one in some scientific direction, another as a classical institution, a third as a historical, and a fourth as a mathematical center. Each might then give due attention to the general need of more elementary studies, and each might become well equipped in the field that it especially cultivates. The serious student could then resort to the institution which gave his preferred studies the greatest care; he might follow the practice, not uncommon abroad, of going in his later college years from one institution to another, in order to get from each what it could give best. Hearty co-operation instead of silent or ill-concealed rivalry might then prevail. If four or five colleges or universities, well distributed over the country, included geography along with geology under the group of scientific subjects that they would cultivate most highly, geographers should for many years be well content. It is not to be expected that advanced geographical courses should be largely attended. They will never "pay" for the cost of their establishment, but fortunately this criterion is not one that will determine the advisability of establishing them in the more liberal universities. When geographical courses come to be recognized as important parts of collegiate and higher study, they will be provided for, even if not attended by large classes of students.

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[3] The author hopes to publish a list of such grouped sheets with brief explanatory text during the present year. Reference to their use is made in the Report of the Geological Department of Harvard University for the academic year 1892–93.

It is not, however, my intention to give at this time so much attention to the outlines of geographical courses that are needed in our higher institutions of learning, as it is to indicate the need that is felt for these courses both in the work of the professional geographer and in the teaching of geography in the lower schools.

Allusion has been made in several paragraphs to "professional geographers." They do not form a large class of the scientific or technical community, but they include so many different classes of workers that it seems best to enumerate them more in detail.

The topographical surveyor has already been considered. Next let us review the work of the cartographer, or professional map-maker, even though he might not consider himself a professional geographer. He is a specialist in these modern days, for he does little work on other subjects than maps; hence, although an artist primarily, he is so distinctly concerned with geographical subjects that he may be included with geographers. His duty is, at first sight, merely to copy faithfully the original field map that is presented for publication, and as far as such copying goes, he is aided much by photography; but when his copying involves reduction of scale or redrawing, it may be far from successful if the artist has no appreciation of his subject. If the map is to be reduced in scale, problems of selection and generalization are presented to the map-maker not unlike those encountered by the topographer; and one has only to compare different small-scale maps of the same region to see what caricatures they often are of the true outlines. It would often seem as if the artist had no idea that river courses, shore lines, and mountain ranges have individual expressions which must be intelligently preserved, when shown at all, if the map is to be faithful to nature, even though its scale is small. There are, of course, some map-makers who are well prepared for their profession, but few of them are in this country. We do not often read here, as we may, not infrequently, in the advertisements on Petermann's *Mittheilungen*: "*Wissenschaftlicher Kartograph, vielseitig gebildet,* *durchaus selbständige kraft, wünscht kartographische Arbeiten zu ubernehmen;*" or "*Kartograph, tüchtiger Zeichner mit geographische Fachkenntnissen,*" etc. We shall not produce the highest class of maps until scientific as well as technical preparation is expected of the draughtsman. Although few persons enter this profession, and although they seldom attain individual reputation outside of their craft, nevertheless their works are widespread, and from beginning to end of educational progress they determine a large number of geographical conceptions; hence the work should be good and the workers well prepared for the work. But until the cartographer is educated to select, omit, and generalize with appreciative skill, his maps will be inexpressive. Many an example of inexpressive maps in school books might be given; and a few examples of good school maps might be found to present by way of contrast; but to that I shall not turn here, reserving it for a special article elsewhere.

The explorer so often directs his attention to other subjects than careful description of the lands over which he travels that he cannot in all cases be called a geographer; but most explorers have geography as a prime subject before them, and they ought therefore to be trained geographers; but unfortunately this is seldom the case. The usual accounts of travel in remote regions by brave and energetic searchers after novelty give little indication of careful preparation for geographical observation. The untrained traveler does not, in the first place, really see nearly all the facts that are before him; for seeing requires trained sight. He may look at them day after day, but many of them make no conscious impression. Although he, of course, recognizes the more important elements of form, he is generally ignorant of their natural associates, and hence fails to search for them; or, if he finds them by chance, he does not record them systematically. The records that he makes are in untechnical language, partly because he is seldom well versed in the limited number of technical geographical terms already invented, partly for the more serious reason that there is as yet so little development of scientific geographical terminology that the art of accurate geographical description necessarily remains for the present in a backward state. If the explorer finds something which he attempts not only to describe but to explain, the chances are that he will make a mistake, for he is not trained in the interpretation of past processes through present forms. The only way in which these deficiencies in the explorer's work can be corrected, is by systematic geographical training of high collegiate grade.

The reports of our State and national surveys, as well as those of Europe, usually contain chapters of more or less detail concerning the physical geography of their districts. These are of course written by geologists, for it is not yet the practice for such surveys to recognize the geographer as a specialist distinct from the geologist, nor even to require that a knowledge of the two subjects should be combined in the geologist. The chapters referred to hardly constitute more than a fair beginning of what is wanted, although in recent years there are certain notable exceptions to this statement. In those State surveys that are concerned with the general natural history of their domain, careful study of geographical features by well-prepared specialists is as worthy an object of attention as the careful study of petrography, or as the study of birds, or crustacea. This is particularly true when it is remembered that the survey reports are prepared not simply for use by professional experts, but for the body of intelligent, yet not professional people of the State. That this is so is often indicated by the presence of several general explanatory chapters by way of introduction to the more technical parts of the reports. To this class of readers, geographical descriptions are particularly appropriate.

Again, for our school-teachers: it is too much to expect them to struggle through the technical chapters on geology, petrography, and paleontology, in search of information about their home State for use in teaching. But they would eagerly study geographical chapters, and would, moreover, use them to the great improvement of their school work. It is curious that our State surveyors have not recognized that, by attracting the interests of a large body of teachers, they would secure a new support for their legislative appropriations; and that additional support is often wanted is only too plainly shown by the instability of many of the surveys. Nothing would so generally secure this as chapters on local geography, prepared expressly for the use of the teachers of the State. At least some of the geologists on the surveys ought to be geographers as well.[4]

Writers of geographical text-books ought, of course, to be geographers, yet it is only too manifest, on examining such books, that their authors are seldom trained in the scientific phases of their fundamental subject. It is hardly surprising that they are untrained, for, if not self-taught, the training that they need can be had at very few places in this country.

It is perhaps on account of the lack of opportunity for professional training in geography, that professorships in this subject are not more generally established; but this can hardly be more than a subordinate reason. If geographers were actively called for, they would certainly be forthcoming, even if special study in Europe were necessary for their preparation. Such was the case with petrographers a few years ago, but there is no lack of them now, and no lack of opportunity for their instruction in our own colleges.

There is much said about the connection between history and geography; but inasmuch as few, if any, historians are proficient in minute geographical knowledge, except so far as it concerns the mere location of various important points, it seems warrantable to suppose that a new light may be shed on the connection between the two studies when it is examined by experts who are well qualified in the two subjects that are concerned. The young historian, who inquires for a field in which he may gather a neglected harvest, can find it in the space between these two generally separated areas of study, or rather in the space where the two ought to overlap.

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[4] I have elsewhere enlarged upon this subject: "The improvement of geographical teaching," *National Geographical Magazine*, V., 1893, 68; "A step toward improvement in teaching geography," Leaflet No. 11, January, 1894, Harvard Teachers' Association; "Geographical work for State geological surveys," *Bulletin of the Geological Society of America*, V., 1893, 604–8.

It appears then that explorers, topographers, cartographers, teachers, and writers on geography all lack adequate preparation in their chosen subject. Compare their opportunities in school and college with those opened to students who decide on a career as chemists, physicists, zoölogists, or botanists. In these subjects there is an elaborate series of courses of instruction under carefully prepared instructors, all aided by well-equipped laboratories, all supported by extended collections of text-books, periodicals, and advanced memoirs. The young man or woman who wishes to enter upon a life-work in any of these studies, may prepare for it by as many years of well-directed study under experts as his or her purse will allow. Any one of these subjects may be pursued all through many of our larger colleges, as the chief object of attention; and in the larger universities, graduate courses are provided in the several subjects which may easily occupy two or three years. If the student's funds are exhausted, there are generally fellowships for the aid of those who give promise of excellent work. At the close of such a preparation the student has a wide knowledge of the subject in general, and a precise knowledge of certain parts of it; and in his own particular line he is often in advance of the world. He is ready for professional service in scientific bureaus, State experiment stations, colleges, and schools. He has, of course, still much to learn, but what he lacks is chiefly experience and the broader views of the relations of things that come only with living through a period of perhaps ten or twenty years after graduation.

The advanced instruction in these various subjects is not maintained because it is financially profitable, but because it is the plain duty of the university to offer to those who wish it an opportunity for study in as many of the lines of higher research as possible. Students who specialize in these subjects do not look forward to great fortunes, but rather to the satisfaction of living an intellectual life, hoping of course that it may lead to some reasonable measure of home comfort.

Geography calls for and deserves as good an opportunity as that which its associated sciences enjoy. When this opportunity is offered by certain universities and is widely known, explorers will be expected to prepare for their work systematically, studying geography, if they wish to be geographical explorers, as assiduously as they now study botany, if they wish to be botanical explorers. Topographers will then be expected to enter their work reasonably well informed on the meaning of the most important subject that will come before them. Map-publishers will not engage the services of young cartographers who cannot work intelligently. Teachers in all grades of geography will be held to a higher quality of work than they can now reach. The result of all this will be the gradual introduction of a higher standard in all that pertains to geographical matters; and the reaction from this result will be most favorably felt in a better understanding of the foundations of life and work all around us. When this time comes, the ascending order of attentions that geography deserves will be better filled out.

Let us next consider the effect of this geographical regeneration on the descending order of attentions by which the results gained through the professional investigators may be passed down into the lower schools, thus contributing their share to the enrichment of the early years of education.

It is generally recognized that improvements in methods of consideration and presentation in the lower schools are introduced chiefly by those who have studied in higher grades than those in which they teach. The recent Report of the Committee of Fifteen emphasizes this principle by urging that all teachers in the elementary schools shall have had a high-school education, and that the high-school teachers shall have had a college course. The manner in which the requirements for admission to college determine improvement of teaching in the schools is also a case in point. Greater attention to English composition, Latin at sight, laboratory methods in physics, and ability to deal with original problems in geometry, all are associated either with the suggestions of college faculties or of school-teachers who are college graduates. It is especially through the broadening influences of college and university work that traditional methods are refreshed and that the newer contributions to a subject are infused into the lower grades of teaching. Geography truly shows some signs of awakening to the need of modern knowledge and better methods on the part of its teachers; but little is as yet accomplished in this direction, because of the break between the investigators and the teachers of the secondary schools. This is the interruption in the descending order of attentions, across which newer and better and broader views now pass so slowly.

As this interruption is lessened by giving a larger share to geographical subjects in higher instruction, two good results may be confidently expected. In the first place, the method of treatment of the subject as a whole will improve; for there is no place where so thorough a consideration is given to the various relations of a subject as in the advanced classes of a university. Professional experts are apt to work for themselves or for each other, and their manner of treatment therefore fails to include the relation of the higher and the lower parts of their subject. Teachers in the secondary schools are, as has already been pointed out, very rarely acquainted with investigation or investigators; they have little share in or association with origination; they are in nearly all cases closely limited to reproducing the statements of text-books. The university professor has an exceptional position between these two extremes. He is nowadays, fortunately for himself, expected to be a producer; he is expected to be personally familiar with investigation and investigators; he is increasingly involved in relations with the secondary schools, and he thus becomes acquainted with their limitations and their needs. Not less important is his close association with the select body of advanced students with whom he continually discusses new problems as they arise; and this is highly advantageous to all concerned, for in these discussions it is pretty certain that crudities of manner or matter will be thrashed out. This style of treatment is not found in any other part of the round of attentions that the well-cared-for subject receives. Discussions in scientific societies where expert meets expert are brief, and too often insufficient for thorough scrutiny. They truly have the advantage of being as a rule between persons of what would be commonly called "equal standing"; but the discussions between a professor and his advanced student, carried on around a table where all sit on chairs of the same height familiarly gathering together week after week, are by no means always unequal contests. They are admirably adapted to searching out the strong and weak points of a subject.

The product of university discussion is a body of seasoned and tested knowledge, well arranged for use. The knowledge comes in part by inheritance from earlier years; but fresh additions are constantly made by contemporary experts, by the professors themselves, and by their advanced students. The seasoning and testing of this body of knowledge is peculiarly the function of the university; a study that is unfortunate enough not to receive this phase of attention will certainly remain in a backward condition. No other treatment that a subject receives can replace the attention bestowed upon it in the university. The recognition of geography as a fitting subject for higher instruction and investigation must therefore not only result in improving the education of those whose occupations call for a thorough knowledge of the subject; it will also improve the condition of the subject itself, so that future work upon it can be done both by school-teacher and expert to greater advantage.

The effect of a better ordered condition of any subject, as developed by university presentation and discussion, is especially apparent in secondary schools. Improvement in the schools is of high importance, not only because it reacts favorably on all later studies, but also because it affects a greater number of persons than can be reached anywhere else through the educational system. It is largely for these reasons that the university study of geography seems to me to be especially important. It will not only serve to improve the condition of geography in general and to give better preparation to professional geographers of all kinds; it will have a peculiarly invigorating effect on the fundamental subject of geography in the schools.

The progress of university influence on geography into the schools will be easily traced. It will be from among those students who specialize in geography in the universities that new professorships of geography will be filled in the colleges and professional schools. The students of geography in college will take places as teachers of geography and the allied subjects in high schools and normal schools. The graduates of these schools will carry the better understanding that they have gained of the subject down into the grammar schools, and thus at last the subject will be begun aright at its beginning. In that good time coming, college students who look forward to becoming teachers of geography in high and normal schools will study geology, including field work, along with their geography; and they will hereby gain a sense of the real meaning of geographical facts. Thus equipped, they will carry their pupils much farther than they now advance; and consequently such of the high-school pupils as look forward to becoming teachers in the grammar schools will be able to enter their work with a much better understanding of it than is now commonly possessed by school-teachers of that grade. Thus guided, the young scholars will find their native intelligence fully exercised in the study of the wonderfully varied facts of geographical form and distribution, and in the understanding of the interesting correlations by which these facts are associated with others. This will be better for school children than the dulling or blunting of their intelligence that has been so often practiced in the empirical study of a rational subject.

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Other important articles on various phases of Geography have appeared in the EDUCATIONAL REVIEW as follows:

The teaching of geography, by Professor William M. Davis (May and June, 1892); Geography in the European universities, by Hugh R. Mill (December, 1893); The status of geography teaching, by J. W. Redway (January, 1894); Applications of physiography to history, by J. W. Redway (November, 1894); Geography as a school subject, by Professor Charles A. McMurry (May, 1895).

IV

ENGLISH AND ENGLISH LITERATURE IN THE COLLEGE

It is now, I think, generally admitted that the first principle of rhetoric is, Write as you speak. The pedantic, declamatory, Latinized diction that prevailed in literary circles a hundred years ago is no longer the standard King's English. Though used grandly by Johnson and Junius, and among ourselves by Hamilton and Marshall and other giants of the *Federalist* era, it has ceased to be the shibboleth of educated men. Probably no college in the English-speaking world now insists upon it. Even teachers in the village academies allow pupils to write expressions like "the world we live in" and "the age we belong to" instead of "the world in which we live" and "the age to which we belong." It is a great transformation when the common pedagogues and the professional purists agree in accepting oral living idioms instead of cut-and-dried musty book-phrases. In order to write well, it is necessary first to speak well—that is, to speak naturally, correctly, and strongly.

The first school work in English should be oral. By this I do not mean exercises in oral sentence-making. Work in which a phrase or clause is the unit of attention is abnormal. The pupils in the fourth, the fifth, the sixth grade—or at whatever earlier or later point the given class shall be found ready—should be severally assigned some topic about which they can tell the teacher something. In a regular class exercise let each rise in his place and say his say. If he makes a plural subject go with a singular verb, or commits any like elementary blunder, correct the expression in passing. If he has the instinct of sentence-form fairly developed, do not criticise him. It will grow to right proportions later. After sufficient practice of this sort, let the teacher say to some successful pupil of the day: "Now write out as nearly as you can what you have said, improving it where you can." The purpose now is to get the pupil's mind to working as freely when he writes as when he speaks. He must forget, and if possible never learn, that writing is a mysterious and momentous thing. He must not be appalled at the sight of his thoughts in written form. So soon as he writes as spontaneously and naturally as he speaks, or approximately so, the part of the exercise devoted to oral composition may be discontinued. If our system of writing were stenographic, it is hard to say what facility in written English might not be attained before high-school years. As it is, we shall do exceeding much and well if we prevent the slowness of our script system from inducing false habits of selection and phrasing, as the student sits down to deliberate composition work. It is such habits of brooding and moping and fretting hypercritically and supersensitively over written forms of thought, capable of ready and effective oral expression, that do the mischief. What is best in our common speech is said on the spur of the moment. If we attempt to plan or formulate our oral sayings we embarrass ourselves and often utter our very worst. Much more may this be true of writing; especially if we are acutely and unconfidently self-critical.

It is quite enough, then, if in the grammar and high-school grades we have enabled a pupil to be natural with his pen, and have curbed his laxness and perhaps exuberance of form. If he can deliver himself promptly of such thought as he can command, he is ready for college work. We all know what has been said of late concerning the preparation in English offered by applicants for admission to some of our best colleges. The great defect is unidiomatic, inorganic phrasing. By use of a method like the above, such English will never be written at all. If a student admitted to the freshman class of any college has not yet command of the living idioms of his mother tongue when he takes the pen, he will probably graduate—if he does graduate—with the same elementary lessons still unlearned.

The business of the student in college is to learn literary English as far as he may. To do that he must read and study the best masters of style and compare his work with theirs. In other words, to learn how to write literary English, he must go to what has been written. But how is he to do this? Shall he give his days and nights to Addison, that he may write in Addison's vein, then to De Quincey and Macaulay, that he may imitate the mannerisms of De Quincey and Macaulay? That was once the theory. When the young man comes from the farm to the store or lawyer's office, and essays to learn the forms and modes of polite intercourse in a great city, he notes how men behave in such and such circumstances and shapes his manners accordingly. He does not select some Beau Brummel for a model, and do just what his model does. He considers the when and the why, he finds out the principles, and lets conduct take care of itself in special instances. If we are carpenters, we look at the way our betters have made houses, and profit thereby. If we are locomotive builders, we look at the way other men make engines. At the last World's Fair we perhaps heard much comparison of this sort going on around the English, the French, and the German locomotives. We overhead discussions regarding the effectiveness of this or that device, the saving in friction, the gain in power or speed. So must the college student go to our classic prose writers. If he is in doubt as to his use of conjunctions, let him compare the writer who in that respect is most to his mind. If he finds out he is too labored and formal in showing the relation of clauses by this standard, he will mend his fault without advice or resolution. Likewise, if he finds an author like Matthew Arnold using three clause-connectives per sentence, and a very high percentage of initial *and's*, he will in so far take such a style as an example of how not to do it, and profit, though negatively, just as much. If he suspects his sentences are too long or too involved to be effective, let him compare the strongest writers upon that point. When he discovers that he turns off periods twice as long as these masters, and loads each down with two or three times as many verbs, he will get new ideals of form that will ever after unconsciously control his pen. I have known a student drop half his sentence weight in two months' study. The story is in fact worth telling complete. A graduate of a certain college some five years back, writing English neither better nor worse than average bachelors of arts, but ambitious to acquire more readiness and facility of expression, applied to the writer of this article for suggestions to that end. He declared he would gladly give five years of the hardest work, if in the end he might write clearly, strongly, and rapidly. He was advised simply to investigate the decline in the average of verbs per sentence, and in sentence weight, since Chaucer. By the time the investigation had been carried down to modern authors, the investigator's style had altered conformably to the improvement whose evolution he had traced, all by the operation of unconscious impulses. He soon remarked about it after this fashion: "What has come over me? I can write now. But I haven't been practicing at all!" Now I chance to have been the teacher of college composition myself when this man took that study. I can testify that I declared the whole duty of rhetoric. I told him he must write clearly, that he must write forcefully, that he must write with some degree of elegance. He admitted the obligation, but did none of the things that he was bid. He did not know how, and I could by no means show him. He himself knew his faults about as well as I did, but he could not help committing them. He needed, not rules, but instincts, ideals, to govern his hand and pen when he was not thinking about his style. These accordingly he had awakened or acquired unconsciously while studying out what improvements the chief writers of our literature had respectively made upon each other in the development of present prose standards.

We have been assuming too much that rhetoric is to be taught, not as an art, but as a science. Writing, however, like speaking, is an art and cannot be taught as a science until our pupils have learned it essentially as an art already. We may teach, and perhaps schoolmasters always will teach, spelling, capitalizing, and punctuation as now, either by rote or rule or both. Beyond that the student must work spontaneously. He must learn first to write as he speaks, either while learning, or after learning, to speak correctly. When he has learned to write as he himself speaks, it remains that he learn to write like other people—to wit, the best minds of his literature and time. At least that should be his aim on entering college; and by the aid and example of his instructors he should be held to actualize it to some degree. But he must not be told vaguely to write literary English. It is of no use to ask builders to make locomotives light and strong and swift, until they are in some sense masters of their craft, so as to build at will. We cannot show our apprentices in rhetoric the processes by which right English is made. They must learn by taking to pieces the finished product, and comparing earlier and less successful specimens and models. There must be structural parsing, actual anatomizing of styles, enough to know once for all the whole normal economy of the rhetorical body.

It remains to consider English literature in the college, and the preparation for it in primary and secondary schools. The fact that literature is cast, not in the kind of English that the school youth speaks, but in a universalized idiom, terse and weighty in matter, and considerably heavier in vocabulary, constitutes the chief difficulty. The average college student, in his first year of residence, can scarcely read classical English prose with ready understanding, certainly not with edification. Professor McElroy of the University of Pennsylvania puts the case much more strongly. He says: "Out of the thousands of young men who in the last twenty-two years have entered the institution to which our personal knowledge extends, only a few could be said to know their own language. . . Their vocabulary was scarcely larger than a day laborer's; their powers of observation were of the lowest—of a page of English read by them they could give nothing approaching a satisfactory account; the words had passed before them in marshalled array, only to leave them half-blind." Here is again the same gulf fixed between spoken and written English that has been already considered in the first part of this paper. Those of us who have taught in high-school classes know how generally the habit of unrealizing reading prevails. Yet we assume, or have hitherto assumed, that the boy or girl of fourteen can carry the sense in reading and does carry it, just like the rest of us. When they read aloud, we note they enunciate readily and well, and give the correct stress on long book-words. We hence conclude that they read understandingly, and comprehend the sense in the authors they take in hand about as well as they ever will. On the contrary, evidence brought to light in recent years establishes beyond question that they comprehend very dimly and incompletely what their eyes see and lips say. The world of books and the world of men are in reality the same, but they have not yet succeeded in bringing these together. Their imaginations are now more active than they will ever be again, but do not respond to the occasions of exercise that books give, as they respond to those in actual life without. This is the difference to be overcome. They must learn the ultimate message out of written words just as they get it out of spoken. They must learn to interpret books just as they read men and things in their daily walks outside. The new plan of using complete books like *Ivanhoe* and *Tales from Shakespere* as school readers in the grades, insures greater and more immediate interest than the old stereotyped and often meaningless "reading lesson." It would no doubt be of the greatest advantage if the teacher should first tell the substance of each chapter to the class in his own language before it is read by the pupils, or should read it to them with their books closed—if he can read it effectively enough. That would start imagination; and their own reading will then repeat, enlarge, and perhaps complete the experience. Moreover, there is the strange fact that few public school pupils of the grammar grades can make anything out of poetry, except of a sort far below their years. From observation along this line in various schools I estimate that out of a hundred boys who read *Ivan-*

hoe and *Waverley* with delight, not so many as five could be induced to read *The Lady of the Lake* or *Marmion*. Of such five I am not sure that there would always be even one who would derive any real satisfaction from the reading, while I am sure the rest would all vote it a bore. The trouble is, they read and interpret everything as prose. They learned to read almost exclusively by way of prose compositions. The prose associations of which their minds are full prevent their taking cognizance of poetical qualities or effects. Hence Scott's poetry, though more romantic and imaginative than his prose tales, and better adapted to their years, is inert and meaningless. Of course, among children of the best traditions there are exceptions; and when such occur they are apt to be exceptions of an extraordinary kind. It takes very great powers of fancy not to suffer deterioration in the usual course of public school training. We insist upon the employment of memory daily, hourly, and minutely. We try our best to get the reasoning powers of our pupils into play. We spend from thirty to thirty-six terms of school work, four exercises per school day, to prepare the young man or woman for college, but we do it all with the perceptive and logical faculties, leaving the sensibilities alone. No wonder Scott's poetry is neglected. He is just as eminently the poet as he is the novelist of boys and girls, of the high-school youth and maiden. But his poetry is not read by these, for they do not read poetry at all. By and by some of those youth will of themselves, by dint of inner refinement and inspiration, and largely in spite of the traditions and influence of school training, divine the secret of poetry. But they will then be men and women, and Scott will be too young for them. They will read Lowell and Stedman and Tennyson. They will buy the usual volume of Scott, and dust it regularly upon their bookshelves. But neither they nor their children will commune with him.

Literature is a thing to be *understood* and *felt*; and teachers in the secondary schools must so regard it. To help pupils understand, the reading class should not be let off on simply pronouncing the words in a given exercise. After a paragraph is read, the pupil reading should be made to repeat its substance in his own terms, or some other pupil who has only listened should do this. Work of this sort should indeed be put far back into the earliest exercises in reading. It is preposterous that school children should form the habit of not understanding what they read. The boy who comes to college should have learned how to gather up the sense out of a page of plain, common prose as quickly as he ever will. Then can anything be done to keep the sensibilities of school children from being intellectualized and deadened before college years are reached? Very evidently. Sixty years or more ago, under the inspiration of the poet Grundtvig, a school was founded at Askov, Jutland, for the specific end of developing the emotional side of the mind. This institution has become famous, and numerous sister academies have sprung up all over the kingdom. They are called *Hoj Skoler*, "High Schools," are supported by the government, and aim professedly and consciously to secure for their pupils the *aandelig udvikling*, "education of the sensibilities." The means depended upon for such effect is principally the study of famous men, the great characters of history. A better means would surely be literature, if the country had one rich and varied enough. Yet these schools are considered wholly successful, and are growing in popularity. If we can learn how to teach to the same effect, we can easily do better in this country. Our instructors must have their pupils read emotional literature to help them feel what has feeling in it, just as thought literature to help them interpret thought meanings. Let them tell something like the story of *Rab and His Friends* or the execution of Charlotte Corday, preparatory to class-reading. Further on, in the first high-school years, something vastly better can be done, as many experiments have shown. This present term, a tenth-grade teacher that I know found it impossible to interest her pupils in the lyrics of Tennyson, the prescribed work for her year. Only a few in the class were not bored with the notes and comments they had to learn. There was particularly a big German boy, who was good in

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other work, but conspicuously dull and slow at this. The experiment was tried of setting the class at finding out what there was in the poems that was not prose, and determining what words and expressions had feeling in them. The whole class was interested in the very first exercise. In the second, the stupid German boy and the other dull ones were as good as the best; and the whole class read once more the poems first studied as unmeaning things, with evident delight. There will be small risk of that class losing its capacity to respond to emotional literature, if the power of discernment is not again disused.

When the student is at length in college, what shall be done with him? I am clear that one thing at least should not be done—assume that he has taste already. It seems to me the great blunder of the day in the college teaching of literature that we presuppose in the student the very thing that our instruction is to develop or enable. It is or has been common to treat pupils in literature as able to appreciate excellences of every kind on sight. But the teacher of music or painting makes no such assumption. Have we not seen what happens when the proud mother goes with her gifted son or precocious daughter to the old German piano master? "My boy plays already with expression, sir," or "My daughter appreciates music, oh! so well," she says. Does he show much interest in that? Does he assume such learners are already up to his level, and assign the Andante from the Fifth Symphony for the first lesson? He assumes nothing, puts the pupil back at dull scales and exercises, and holds him down to hard work All his vaporings and improvisings go for nothing. But if a boy in college has chanced to scribble a few stanzas of fairly respectable verse, or puts together in a theme some of the things he has read about Landor or Mrs. Browning, we think him as a matter of course capable of interpreting the finest compositions. Then we begin lecturing to him on the higher aspects of literature. Is it strange he goes out of college almost barren of real spiritual culture? I had a student once who was recommended by his teacher as a genius. He read only the selectest things, and walked about knee-deep in criticism. Moreover, he was afraid of studying literature systematically, according to class methods, lest it should spoil his powers of appreciation and injure the delicacy of his poetic sense. I tested those powers and that sense one day by getting him to read these lines from Tennyson:

> And I rode on and found a mighty hill,
> And on the top, a city walled; the spires
> Pricked with incredible pinnacles into heaven.

"Where is the poetry here in words?" I asked. "I think it is in '*incredible*,'" he said, "or '*spires*.'" "How about '*pricked*'?" I ventured. "I don't understand that," he answered: "I don't see any meaning in the sentence." Yet all there is of Tennyson consists essentially in tremendous figures like this—which indeed is but one of the minor great ones. This student, poor in penetration as he was, could read poetry far better than the majority of my class when they left college, or of any college class that I have since known. But the graduate from a college of liberal arts should be wholly able to appreciate the best that has been thought and said. Is it the fact that men of liberal culture generally are? Is it not notorious that they are not? In conversation last summer with the senior professor of literature in one of our first universities I was surprised to hear him declare that our college teaching of literature was a failure. "What proportion of students graduating from our best colleges," I asked, "are capable of genuinely appreciating Tennyson?" "Not ten in the hundred," was his answer. These ten, he might have added, are generally self-made readers—that is, possess unusual taste, or have developed it in advance, through the influences of a literary home. The remaining ninety, at any rate, have no especial fondness for letters, and what is worse, do not believe anybody has really any better experiences of ultimate beauty than their own. "Shakspere and Browning," they will say, "are just what you put into them. We read those things in college, but found them rather dry. The professor, he made out a lot of things in what we read, but we couldn't see them. Our professor was a good deal of a crank, anyway, on Browning and Shakspere." We have all heard this sort of talk from college men. It seems to me pretty sure proof that our instruction is of little worth when our graduates talk like that. It is bad enough to have them fail of grasping our subject. But when they not only fail to get at the inner truth which we profess to teach, but even question whether there ever was anything to grasp, it seems to me it is time either to quit, or to change the method. I speak, I may add, from no second-hand experiences of this kind.

The simple truth is: Taste is of the feelings; and we have been trying to make it a thing of the intellect, of reason. Polite literature appeals to taste, and must be spiritually discerned and appropriated. We have been telling our students our own experiences, and trying to get them to accept these as their own, instead of producing the same experiences in them. We can learn something from the teachers of science. They lecture, to be sure, on the chemical or physical properties of substances; but they immediately thereafter send the student away to find out the same things experimentally for himself. The professor of botany does not tell his class a mass of things about a flower that they cannot appreciate. He gives them a simple specimen, bids them observe for themselves, and be sure they understand what they see. Little by little thus the plant kingdom begins to take on substantial meaning. They can then not only be sure that this or that plant has a pleasant or an offensive odor, is pretty to look upon or the contrary, but command a vast number of other facts and the reasons for them. In like manner, the professor of chemistry insists that his student have an experience of every phase and stage of chemical change, taking nothing on another's testimony. Once science was taught—as many of us can testify—in about the same way as we have been trying to handle literature, and with about the same success. What is the result of changing the method? Students not especially gifted in science subjects, or partial to work of that sort, make good analysts, and investigators, and teachers.

They all become full of their subjects in a personal, practical way. Even the slowest and most unpromising of them all can grasp and realize the essentials of his specialty, and go home from the university in a sense truly expert in the work he has pursued. I have never known a student who could not, by application, build himself up into an intelligent and confident mastery of any branch of science taught in college by the laboratory method. I know of no like instances whatever among many hundreds, indeed thousands, of students pursuing the study of literature in college classes.

The object that should be had in view in the college teaching of literature should be at least to enable all students to comprehend and appreciate all that is best in literature. The theory is very simple. Each pupil, as he attempts to read a composition involving high æsthetic quality, probably comprehends and enjoys the whole in some degree. It is, we will say, a poem, put together with exquisite delicacy. He appreciates somewhat of the delicacy, but the process of appreciation is incomplete. He catches something of the effect from the lofty and refined associations in the thought or language, yet they are on the whole shadowy and vague. Entrancing visions form themselves in his fancy, or begin to form themselves, but the operation is suddenly arrested and the scene is blank. He knows it should yield an integral experience of some kind, but that experience is denied him. He attains in part to the contemplation of the ultimate types of truth or of beauty which the poem was intended to reveal, but there are in the end only flashes, incompleted hints and glimpses. The work of the teacher is plainly to help him complete and perfect each of these inchoate and interrupted experiences. To do that he must not cause the substitution of other experiences for them, but begin back with simpler ones of the same sort—just as in the gymnasium the trainer puts into our hands first the lightest dumb-bells, to exchange for others when we grow up to them. So after months of patient toning and quickening of the sinews of the mind, the student is made ready for the highest and most lightsome leaps of fancy, and the most concentrated strains of imaginative energy—such as the poetry of Browning and Tennyson requires. In short, we do just the same things here as men do in the other arts. We study out the devices our authors use, just as connoisseurs examine the details of a picture to complete their experience of the message. No art critic is afraid of understanding it utterly and absolutely to the last detail, lest his enjoyment of it suffer. On the contrary, he will study it inch by inch for hours and days, in order to know the author's adaptation of means to ends. He will, if he is honest, stoutly decline to risk a judgment until he has canvassed all elements and parts. Unfortunate is it that such is not the habit of critics in literature. Some of them will say, indeed have said, that it is impossible to learn anything about literary art; and if you show them it is possible, they will declare it sacrilege anyway. Since their instructors did not tell them anything about such study and criticism, they know of course it must be wrong—no matter how full all other departments of art and of inquiry may be of the same processes. It reminds one of the objections first urged against the study of anatomy in painting and medicine—it was a crime against the dignity of the human body; and it was sure to interfere with the processes of the Resurrection. There is nothing different in the theory of the method here suggested, from the theory in teaching any of the sciences of observation. We are simply to extend superficial impressions into organic and final ones, and deepen the experiences emanating from them until complete. We are not to be afraid lest the method divert the mind from essentials to incidentals, from whole experiences to partial ones. This is no more true than in the process of learning to read in our earliest school days. We first learn our letters, to be sure; but when we can rise to words and sentences we are not troubled with thoughts of letters and syllables as such, but are absorbed with the larger meaning. If we should go to teaching young pupils of this grade the origin of the alphabet, and the earliest forms of the different characters, we should err, of course. This is the fault of a certain system of instruction, from which the preceding must be kept distinct. The one thing of all things to be avoided in the study of art is the multiplication of circumstantial aspects and the substitution of experiences derived from them for the organic and vital experiences that come from the ultimate truth or beauty in the theme.

As for results from trial of the method, though there is a large array, time remains for but a word. They are all, in short, precisely the same as those met with in all laboratory teaching—the ninety are rendered intelligent and capable and enthusiastic readers like the other ten of the literature professor's hundred. They believe in their work, and pursue it outside the limits of prescribed tasks. After their susceptibilities to poetic terms have been quickened and their powers to conceive gigantic metaphors have been enlarged, the most unusual literature is read with ease and edification. A teacher who has tried the method for several years tells me of a special case. A graduate of a good college where the old method was in use, and teacher of literature since in secondary schools, after six weeks' study of the new method reports that he now reads and enjoys poetry like the *Alastor* and the *Adonais* for the first time. A more important experiment, made last year, was also reported. The students in nearly the whole college in which the experimenter teaches are required to take in junior or senior year the general survey of English literature from Chaucer down, with library readings in about a hundred authors. He divided the literary and classical students, and others having considerable preparation for the work, from those coming from the scientific and technical groups, these last having for the most part absolutely no such preparation. The literary and the classical students were taught as in former years. Assuming that they had taste already and could read anything, he set them the usual tasks. The other pupils were kept for one month in elementary training in poetic and æsthetic forms and figures, then set at the same work as the rest. At the end of a term the scientific and technical students had considerably distanced the others; at the end of the year—to use the language of the report—"All but three or four of the scientific students were better and far better than all but three or four of the classical and literary." In the elective work of the year following, dependent upon the preliminary study just referred to, the pupils from the scientific courses are largely in the majority and do the best work. Indeed, so great is the interest, a movement to organize a permanent literary club, emanating wholly from the scientific and supposed unlettered side of the class, has been carried through, and systematic and independent study of Browning's poetry begun.

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Other articles on this general subject have appeared in the EDUCATIONAL REVIEW as follows:

The function of literature in elementary education, by Professor George E. Hardy (July, 1891); On teaching the effective use of English, by Superintendent A. P. Marble (January, 1892); College entrance requirements in English, by Henry S. Pancoast (February, 1892); Can English literature be taught? by Professor Brander Matthews (April, 1892); Entrance examination in English at Yale, by Professor Henry A. Beers (May, 1892); Developing literary taste in students, by Professor Edward T. McLaughlin (January, 1893); Report of the Conference on college entrance requirements in English (September, 1894).

V

THE STATE AND THE PRIVATE COLLEGE

The investigations and discussion which the subject of higher education in the United States has been undergoing during the past decade, have in the main fallen into two classes. In one, attention has been given to the State university, an investigation of the conditions necessary to its success, the improvement of its facilities, and the enlistment of public and legislative interest in it. There has sprung up, especially in the West, a considerable body of educators and promoters of education, who look to the State university to afford, in the Western and Central States, at least, all that is good and progressive and highest in higher education. In the other class fall the discussions of the Greek question, the elective system the place of the sciences in the course, the three years' curriculum, the functions of the ideal university, and similar questions. The participants here too often discuss, generalize, and dogmatize as if arguments and conclusions readily applicable to Harvard or Yale or Columbia or Michigan were equally pertinent to all the colleges in the land, large and small, rich and poor, State and private.

Anyone familiar with educational concerns knows the utter absence of uniformity among American colleges and the inapplicability to probably four-fifths of the so-called higher educational institutions of theories or projects based solely or mainly upon a study of the Eastern colleges. The truth is that in neither of the two classes of discussions has much been suggested that fits the conditions of the three hundred small colleges. Suggestions or reforms that on one hand can affect, because applicable to, but one-fifth of the colleges and one-third of American college students, or that on the other hand regard solely the State universities with only one-seventh of the collegiate students, manifestly fail to afford any general solutions of the present higher educational problems.

The movement in higher education that concerns most deeply the average citizen of all save perhaps the Northern Atlantic States is the improvement of the private sectarian and non-sectarian colleges, for to these are sent two-thirds of the youth seeking a collegiate training. President Jordan expressed the opinion in the *Forum* some time since, that "the educational chain, whether strong or weak, cannot count them [the colleges] among its links." To exclude from the educational system of America the institutions where two-thirds of the higher work is done is to ignore facts and to state an educational fancy. The colleges are here; they are in operation, and what is needed is not a hand to thrust them all outside of the ranks of the "regular" educational institutions of America, but a hand helping toward their better classification, systematization, and adjustment to modern conditions.

The condition precedent to such improvement must be a wiser ordering and disciplining of the colleges as a body, and the establishment of greater uniformity and agreement in methods, machinery, and scope of activity among those which on careful examination are found to be anything better than secondary schools. What a motley appearance is presented by the 442 "universities and colleges" in the United States,[1] with their bands of students moving along the road to the baccalaureate degree; what an immeasurable distance between Harvard with 253 instructors, 2658 students, working in buildings valued with their apparatus at $3,750,000, with a library containing 400,000 volumes, a productive fund of $7,030,031, and an income of $722,410,[2] and the college in Georgia with 2 collegiate instructors, 80 students, working in buildings valued with the apparatus at $6000, with a library of 500 volumes, no productive funds, and a revenue of $425 from all sources. Between these two are colleges of all grades as regards instructional force, equipment, endowment, and courses of study, yet all authorized to confer and annually conferring the same baccalaureate degrees, supposed by the world at large to represent a rather definite amount and kind of training, but indicating, in fact, the completion of any variety of course from a poor high school or academic to the best curriculum that educators have been able to frame.

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[1] The figures in this article, unless otherwise indicated, are from the latest Report of the Commissioner of Education. No account is taken of the 158 "colleges for women," the majority of which are authorized to confer degrees.

[2] For 1888–89.

[3] In 1891–92 there were in the United States 48 "colleges" which had fewer than 5 collegiate instructors.

Professor James Bryce is undoubtedly right in his opinion that a large number, possibly a majority of the "colleges," while doing a kind of educational work, are not giving a true collegiate training and are contributing little if anything to the cause of higher education. Nor is that the worst of it. Many of them.by assuming the name of college and conferring high-sounding degrees on half-educated young men and women have introduced, and are perpetuating, a shoddy and pretentious type of "education" that may often be more harmful than helpful. Much of this training, if given and received as school training, would be of high value, but when called "collegiate" education and crowned with a degree, tends to create superficial and self-important young men and women, conveys to the public a false notion of higher education, and brings, if not disrepute, at least no credit to American educational ideas. Notwithstanding this, many educators continue to say: "This may all be true, but these small colleges are private and denominational institutions, independent of each other and of the State, and nothing can be done except to leave them to follow their own bent. As time passes the best will improve, while the weaker will from natural causes die or drop back into their proper place." Statistics, meager enough on this subject, indeed show that many of the weaker do die, as in Ohio. where of 56 colleges chartered before 1860, only 22 are now living, but they also show that even more new ones are springing up, that the weaker colleges are not diminishing even relatively, and that the distance between the best fifty and the last fifty is far greater than it was three or four decades ago. Cases could be cited where the holder of a baccalaureate degree from one of the small "colleges," desiring to do advanced work at one of the better colleges *in the same State* has found that his baccalaureate diploma would be accepted by the second institution as admitting him merely to the freshman class. Formal recognition of differences in the grade of colleges has been taken in the organization of State College Associations including certain of the colleges and ignoring the remainder because of their low standard; and also in the spasmodic and mainly futile efforts, voluntarily made by the colleges within a State, toward the establishment of uniform requirements for admission to the freshman class.

The fullest play has been afforded to individual effort and the law of survival in their application to educational institutions, and as yet the results are not such as to satisfy anyone, or to give promise of speedy and systematic improvement of American colleges, if it is to be accomplished by the unaided voluntary action of individual institutions.

Two obstacles in the way of an intelligent and comprehensive improvement and development exist—the variety of species of the genus college and the want of authentic descriptions of the various species.[4] Now both this needless and perplexing variety and the lack of full knowledge as to the points of variation are due to the same cause—the theory generally adopted in this country as to the status of the private college, and its relation to the state. In regard to such foundations the doctrine of *laissez faire* has been pushed to the extreme limit. If anyone desires to found an institution for educational purposes the state must afford him every facility for carrying out his desire; must interpose no obstacles of any sort; must impose no conditions upon the nature and scope of the pro-

[4] I am not unmindful of the Reports of the Bureau of Education, some of which, especially the later ones, are valuable and exceedingly helpful; but they give only a small part of what is needed in this connection, and owing to the delays incident to publication at the government printing office the Reports are from two to four years behind, that for 1888–89 coming to hand late in 1891, the one for 1889–90 in August, 1893, and that for 1891–92 in April, 1895. [This delay has been overcome by Commissioner Harris, and subsequent reports will appear promptly.—Ed.]

posed institution; must permit it to establish such courses as it chooses, and to grant such degrees and on such terms as the institution pleases; and must make no inquiry at any time thereafter as to what the institution is doing, or whether it is doing what it professes and advertises. Such is the theory of the state's relation to the so-called private academies, seminaries, and colleges that is prevalent in most of the United States. In the persistent application of this theory is found, too, the cause of most of the unhealthy symptoms, and organic and chronic weaknesses in American higher education. If a mild corrective could be applied here, the entire higher educational body would become stronger and perform its functions more efficiently.

One is not a rank socialist who maintains that in a matter touching the general welfare of the people, if the state has a legal and moral right to concern itself, it is simply a question of expediency whether it will do so; and, further, that if an advantage will accrue to the people as the result of state action, not offset by disadvantages, then, where the legal and moral right of intervention exists, it is no longer even a question of expediency, but a matter of duty, and the state is derelict if it does not act. Let us apply this principle to the case in hand. That education is intimately related to the general welfare is abundantly proved by the establishment of public schools, State Normal Schools, and State Universities and agricultural and mechanical colleges. Prior or in addition to these, the States have also permitted the establishment of incorporated private schools, academies, and colleges. Every degree-granting college in the United States derives from the state the right to exist and to exercise its functions as a college. The state has an undoubted right to determine the conditions upon which such privileges of existence and activity shall be granted and exercised. Further, in the case of every college incorporated under general laws, and of nearly all operating under special charters, the right remains in the state to modify the conditions of the institution's activity. Even further, in all but three of the States, the lands, buildings, and working equipment, and in many the endowment fund, in whole or in part, of colleges, are exempted from taxation—from obligation to contribute to the maintenance of the power that protects them—so long as the property is used for the purposes of which the institution was incorporated. The state certainly has the right to seek, and the power to obtain, such information as will show that the terms and objects of incorporation are carried out.

If the legal right of the state to inspect the colleges and to insist upon official reports from them is undeniable, the expediency of such inspection and reports seems equally clear. The doctrine of *laissez faire* has long since been abandoned as to many matters formerly considered purely private, yet touching directly the physical safety or material well being of the public. No one will to-day deny the expediency or the beneficial effects of factory laws, railway commissions, laws for the prevention of food adulteration or of quackery in the practice of medicine or dentistry. The conditions attending American educational institutions are such that, in the interests of honest education as affecting public welfare, state surveillance, if not state regulation, is warranted, and on considerations similar to those justifying state action in the fields indicated. If the physical welfare of the citizen is properly the object of such care by the state, an equal or similar responsibility exists to see that that which is offered as educational food is wholesome, or *at least that it is what it purports to be;* that no fraud is indulged in at the expense of those who are in process of education; that no quack educators are allowed to practice, and that an established standard test, if one may so term it, shall be met by seminaries and colleges as a condition to the disposal of their wares.

This principle has been accepted and acted upon in a few States, notably New York and Michigan; and its application in the legislation and practice of the others would go far to classify and systematize higher education or to prepare the way for that systematization which the writer believes to be an essential condition of steady and consistent progress.

In the discussion of measures tending to establish closer relations, for the good of both, between the state and the private college, two classes of cases must come under consideration; (1) Colleges already in existence; (2) New organizations applying for charters as colleges. For convenience, the latter will be considered first.

That it would be a real gain for the cause of education if the American proclivity for founding "colleges" could be restrained is agreed by nearly all who have given the subject attention. Like many other things good in their nature, it needs regulation and training to curb its luxuriant growth. This wild spread and multiplication of petty colleges is due in large measure to the lack of wise laws touching their planting and nurture. In twenty-six States, to-day, any number of persons not less than a stated minimum, varying in the different States from two to nine, may by merely filing articles of association setting forth the name and proposed objects of the association, receive a certificate of incorporation as a college, entitled to confer all customary degrees. In none of these States is it required that the corporation have a building, a piece of apparatus, a book in the library, or a dollar of endowment, nor is there any direction or specification as to the character or scope of the course of study. So far as the statute-book is concerned, the college so founded may confer any ordinary degree at the end of any course of study it chooses to establish, or even upon any person it pleases, without requiring that he shall have studied anything. In nine other States each college is chartered by special act; in many of these hardly greater limitations are placed upon the corporators than by the general laws of the first group of States. In three States there are no private colleges and no laws for the incorporation of such. In the remaining six States—Arkansas, Michigan, Minnesota, Nebraska, New York, and Ohio—various conditions are imposed and requirements made prior to the incorporation of a college. In Arkansas any number of persons not less than nine, and in Minnesota not less than three, may receive a certificate of incorporation for the purpose of conducting a college, with the power of conferring degrees, "provided that the course of study be as thorough in all regards as is usual in similar institutions in the United States"—a condition which, on account of uncertainty as to what is "usual" in similar institutions, would be practically valueless even if any officer were charged with its enforcement. In Nebraska and Ohio any five persons may organize a college, but in the former State the certificate of incorporation is not issued, and in the latter the degree-granting power is not given, until the college is possessed of real and personal property to the value of $5000. In Michigan any five persons may become incorporated as a college[5] with full powers when $50,000 has been subscribed or given and fifty per cent. actually paid in, "provided that the course of study pursued be in all respects as thorough and comprehensive as is usually pursued in similar institutions in the United States, and that no literary honors or diplomas shall be granted unless candidates therefor shall have pursued such course of study for at least two years." Finally, in New York the power of incorporating colleges and academies rests solely in the hands of the "Regents of the University of the State of New York," who may prescribe such requisites and conditions for incorporation as they see fit, "provided that they shall require, besides provision for suitable buildings, furniture, and apparatus, an endowment of not less than $100,000 for a college of arts . . . and for any other institution for higher education means for its proper support."

Of these various provisions only those of Michigan and New York deserve serious consideration, as the others are manifestly inadequate either as guarantees of good character for the colleges or as checks upon the founding of quack institutions. It is to be noted that both New York and Michigan seek to insure the character of the college by requiring a fixed minimum amount of property in its hands, assuming correctly that to do collegiate work requires money, buildings, and apparatus of appreciable amount. They differ mainly and widely in the amount required as a condition of incorporation. It may be safely asserted that in this era of higher education any "college of liberal arts" with less than $50,000 in plant and endowment is *prima facie* fraudulent, if it claims to do thorough work. It may be providing educational facilities of a low order, but it is not doing honest collegiate work. The Michigan requirement, while of the right sort, is not high enough to afford a safe guarantee of the character of the college founded in compliance with it. Yet even this low requirement, if it could be applied to all existing "colleges" in the United States, would relegate to their proper place as academies or seminaries a considerable number of pseudo-colleges, for of 386 reporting on the subject in 1889-90, 88, or 23 per cent., had less than $50,000 of property.

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[5] In Michigan the name of "university" is reserved for the State University at Ann Arbor. No other educational institution in the State can be chartered as a "university."

But if the Michigan requirement is too low to accomplish fully the intended purpose, it is probable that the New York requirement of $100,000, "besides provision for suitable buildings, furniture, and apparatus" would be regarded in many parts of the United States as too high, however desirable its universal establishment may be from the standpoint of educational progress and efficiency. In 1889-90, of 317 colleges reporting permanent productive funds only 120, or slightly less than two-fifths, reported $100,000 or over; 98 others failed to report · on the subject, which would hardly have been likely to occur in so many cases had they possessed any considerable funds. We have then but 120 out of 415, or 28.9 per cent. of the colleges in the country, reporting an endowment equal to the New York requirement.

A medium must be struck. The imposition of a property qualification higher than the Michigan and lower than the New York requirement would insure the character while it would limit the number of the colleges hereafter founded. A requirement in every State of $100,000 or $125,000 in the total (for buildings, apparatus, and endowment) as a condition to the grant by the state of collegiate powers and rights to any proposed institution, would certainly tend to prevent the establishment of quack colleges, while at the same time it would not check or limit the development of the true higher educational institutions and spirit. Nor would it discourage philanthropists from assisting the cause of higher education. Cut off from the privilege of founding petty colleges with insufficient resources, they would endow chairs, or establish new departments, or schools, in existing institutions; or would found academies and seminaries which, under their proper name and in their true dress, could do creditably the same kind of work that is now the sole work of so many "colleges," or could fill the gap yawning in many States between the high school and the better colleges that is now bridged by that educational makeshift, the "preparatory department." A religious denomination, instead of founding two or three colleges in a single State, would then maintain one institution far better and stronger than the present pair or trio.

As a second condition of incorporation, each State might with the utmost propriety insist that the standard for admission to the freshman class in every college be at least equivalent to the average work represented by the diplomas of the ten largest high schools in that State. This would not be too rigid a requirement, and it would establish the proper relation between secondary and higher education in each State. As the high-school courses were improved and advanced, the standard of the colleges would of necessity be raised, while at the same time the better colleges would be constantly urging the high schools to further improvement. Further, the requirement for admission to the colleges, based thus upon the high-school courses as a minimum, would still be elastic enough to admit a reasonably wide variation at different institutions, thus avoiding that absolute uniformity among colleges which is regarded by many educators as on every account undesirable.

Finally, a requirement that no baccalaureate degree should be conferred before the completion of a course of study representing the equivalent of three or four years' work above the grade of admission to the freshman class would guarantee the quantity if not the quality of work represented by a collegiate diploma, while in no way interfering with the independent management of the private colleges by their incorporators.

The simple means necessary of adoption by the States to insure conformity to these requirements can best be indicated when we are considering the relation of the state to the colleges now in existence.

If it be admitted that "the time for more concentration has come," as Professor Bryce puts it, "and that restrictions upon the power of granting degrees would be useful," the limitations and checks on the future colleges above mentioned tending toward that end are far preferable to more drastic measures which would lodge the degree-granting power in each State in one central body to which the several colleges should send up their finished products for examination and reception of degrees.

To the colleges already in existence the direct or immediate application of the conditions proposed for new foundations would be unfair, even though the legal right to impose them undoubtedly remains in the state; nor would it be advisable, even if practicable, to attempt directly and by state authority such an extensive modification of existing institutions as would thereby result. With the existing colleges the change sought, the end to be attained, is their better classification and gradation, the improvement and elevation of the better among them, and the voluntary retirement to their proper place of the hopelessly inferior. The present Commissioner of Education believes that the tide is setting in this direction when he says: "Inasmuch as the larger colleges have developed into universities, there is evident the beginning of a crusade against the small college that will force it to step down into the work of secondary education and renounce the work of higher education."[6] If this be true, it is certain that more information is needed concerning the colleges, in order that the crusade may be an enlightened one. We have already referred to the dense ignorance and the gross misunderstanding of conditions manifested in discussing "the promotion of higher education," as if something were under consideration which had the same meaning and could have the same application in every collegiate center. It becomes daily more evident that the gathering of correct data and full and reliable information concerning the colleges is the condition as well as one of the means to the classification of the existing colleges, and toward the improvement of those that can survive the ordeal of public inspection and official inquiry. These inquiries can manifestly be made only by the state. Her right to make them we have already shown. The same system of inquiries and reports about to be indicated for existent colleges would be applicable also to all new foundations, and in their case would elicit all the information necessary to show whether the conditions of incorporation were observed.

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[6] Report of Commissioner of Education, 1888–1889, p. lvi.

To attain all these purposes, in the case of both old and new colleges, a simple statutory provision in each State, substantially like that in force for many years past in Michigan, would be necessary, and, if honestly and thoroughly enforced, would be adequate. The law should embody the following points: First: Each college and seminary should be required to report annually, under oath of the proper official, to the State educational department, (1) its financial condition, including endowment, income from all sources, and expenses; (2) value of buildings, (3) brief description, including statement of value, of equipment; (4) names and positions of instructors; (5) requirements for admission to the collegiate departments; (6) courses of study in detail, (7) number of students in each course; (8) such other information, pertaining to the educational affairs of the institution, as may be demanded by the State authorities. That no mere voluntary system of collecting statistics will educe these data from certain classes of private colleges is proved by the experience of the superintendent of public instruction of Tennessee, who in his report for 1890 says: "An effort has been made to collect important statistics showing the condition of the colleges and higher educational institutions of the State, the number of such institutions, the value of their property, the number of teachers employed, the number of pupils enrolled, the degrees conferred, etc. The officers of such schools in some instances refuse to give the information sought."

Second: The head of the State educational department should be authorized to appoint annually for each institution a board of three visitors, two of whom should be college graduates. This board, armed with authority to compel answers to its inquiries, should visit the institution, inspect its plant, its classroom work, its general condition and operation, and in an official report, to the authority appointing it, embody the results of its investigations, including suggestions and criticisms based thereon.

Third: Both the official report of the college and that of the board of visitors should be included in the annual report of the educational department and should be published in full by the State at the earliest possible date.[7]

The net effect of such a set of provisions—in force to-day in some of its features in a few States—it would be hard fully to estimate. The following good results would certainly flow from it. Accurate, definite, and official information would be secured as to the scope, educational facilities, and financial resources of each collegiate institution chartered by the state, and exempted from taxation because of the educational work it is supposed to do for the people. The investigations of the visitors would furnish official and unprejudiced evidence as to the strong and the weak features of each institution, abundance or deficiency of equipment, efficiency or inefficiency of the teachers, from which it would be relatively easy to estimate the character of the college and the grade of its work. The publication of the reports would place in the hands of the public reliable information, not in the form of the usual catalogue or other advertisement, as to the character, facilities, and general merits of each institution. It would spur all the colleges to their best efforts and would help the stronger by calling attention to their excellences, while it would stimulate some of the weaker ones to better effort, to the increase of their endowment and equipment, and to an improvement of their standard, by subjecting them to a direct and trying comparison with their sister institutions.

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[7] Speedy publication is an essential point. The value of reports of the Bureau of Education is greatly lessened by the fact that their data are from two to four years old when published.

The adoption of these provisions would in no long time make it apparent to some of the puny institutions miscalled colleges that it is better and more honorable to do academic work of a high type well than to undertake collegiate work and do it poorly. It would pave the way for future state action, if desirable, withdrawing the degree-granting privilege from such institutions as were clearly unable, judged by their published statements and visitors' reports, to give their students a training and an education worthy a degree. Finally, it would make it possible to consider educational problems not merely in their limited application and relation to a few of the strongest colleges, but to the higher educational institutions of the country ranged in well-defined classes.

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VI

HERBART'S DOCTRINE OF INTEREST

The two words *apperception* and *interest* suggest for us the two most important ideas of Herbart's pedagogy. Apperception implies the mind's reaction against the impressions of the senses—it recognizes and explains to itself what it sees, hears, tastes, touches, or smells. With mere perception we see and hear, but we do not make out for ourselves what it is that we see and hear. When we connect the object seen or heard with the totality of experience and explain it, we are said by Herbart to *apperceive* it. Mere perception without apperception is stupid work. It sees, but it does not "make out" the object. For every object is as it were a ganglion in an infinite network of causal relations—all the influences of the universe flow hither to it and make themselves manifest in it to him who has the inward eye to discover them. The work of discovery is apperception. The causes that have made this object what it is, the future effects of its being and acting, the significance of the whole, these are not to be perceived, but to be *apperceived.*

The idea of apperception is a rallying-point for reform in methods of teaching. The teacher that allows his pupils to stop in words without a sense of their meaning, or to be contented with the inspection of mere things without a study of their relations, needs to be told that not perception but apperception is the result to be sought by teaching. The method that is content with mere things or mere words must give place to a method that connects words with the stored-up human learning associated with them, and that traces up the links of the causal series, which extends outward in every direction from each thing.

Apperception, however, is usually taken by Herbart's disciples in a more restricted meaning, to include the process of mental reaction in the presence of an object. The mind connects the newly-perceived object with its memories of the same or similar objects and with the reflections that have clustered about it as an individual or a class. It is the process of identification or classification; it is the recognition of the new as a repetition of, or a variation from, the old.

This subjective or inner reaction of the mind is, in fact, a part of the process described above as the tracing-out of the causal network that envelops a thing and makes it to be what it is. It is necessary to the proper understanding of the significance of apperception to bear this in mind. It is the directing of the mind upon the causal nexus. It is always a glimpse, at least, of the genesis of the object (its origination out of other objects) and of its growth into, or production of, other objects. The example given by Noiré of a causal series of this kind in the apperception of a piece of bread, shows BREAD in the middle, a long series of presuppositions before it, and a long train of consequences following it: grain, rye, planting, reaping, threshing, barn, mill, grinding, meal, dough, yeast, hops, lard, kneading, baking, BREAD, food, eating, digesting, nourishment, animal heat, organic tissue, new strength for labor, et cetera. And one could pause on each one of these steps in the causal process and move off laterally on a series of its own. This gives us an idea of the business of man, in comprehending the world in which he lives. Apperception is this act of widening our knowledge of the immediate being of objects by adding to it the mediations or links of dependence that connect it with the totality.

In fact the full force of the idea of apperception cannot be seen and felt until the teacher outgrows the first stage of knowing and sets it aside for a second and higher view which sees the relativity of all things. Each thing is relative in its very essence, being derived from something else different from what it is now, and having a destiny beyond its present in which it will have still different functions.

All acquired knowledge is "apperception-stuff" or material that we can use for the explanation of new objects presented to us by our senses.

It is evident that the first maxim of pedagogy would direct the teacher to take pains to build up in his pupil a mass of apperception material—a "concept-mass" of associated ideas which will explain to the pupil his world and prepare him to meet the demands on him for action. He must grow in two directions—that of the intellect, and that of the will. Herbart meets this with his doctrine of interest—education must appeal to the pupil's interest.

But Herbart and his disciples do not set up their doctrine of interest solely because the doctrine of apperception would demand it. They have a special reason for it in the fact that they have no place in their psychology for the will as the free self-determination of the soul. Herbart's system makes the soul to be devoid of self-activity and of all multiplicity of attributes.

It is necessary to make clear this important point in Herbart's system.

Greek thought before Plato and Aristotle sought in various ways to solve the contradictions of experience, wherein we see one as many and many as one. The earlier systems were all failures. Only when the idea of self-activity was reached by Plato, and demonstrated by Aristotle, did philosophy attain a firm foundation from which it has never been moved in the two thousand years that have followed.

After the time of William of Occam it seemed indeed for a time as if the basis of ontology had been proved untrustworthy: "All universal ideas must be figments of the intellect." This direction of thought, however, culminated with the *Inquiry* of Hume: "Even the Ego is only an arbitrary synthesis of feelings and mental images. Causality is only invariable succession." But Kant just at that time opened a new road to the ontology of Plato and Aristotle by investigating the origin of the ideas of time, space, quantity, quality, and causality. His followers, Fichte, Schelling, and Hegel succeeded finally in demonstrating through psychology the spiritual results reached by Plato and Aristotle through ontology. Self-activity and not simple pure being is the Absolute.

The philosopher Herbart, although his youth was passed in the days of these highest triumphs of the human intellect, did not enter in and partake. For his philosophy was reactionary. He failed to grasp the idea of self-activity as the principle of philosophy, and as a consequence could not accept either the new solution of Kant and Fichte, or the old one of Aristotle and Thomas Aquinas. Although he borrowed his idea of apperception in part from Leibniz, he was not able to see the insight on which Leibniz had based his Monadology, namely the idea of Entelechy or self-active being.

His mind rejected the only two positive solutions that the human race has reached, the Greek and the German. Christian theology has distinctly adopted the Aristotelian proof of the Personality of God.[1] The Kantian school has erected a demonstration equally explicit and satisfactory on a new basis, that of rational psychology.

In the face of these facts Herbart turns back to the pre-Socratic points of view of the Eleatics and Atomists, and adopts with commendation the metaphysics of Parmenides and Democritus!

In his *Introduction to Philosophy* of 1813[2] Herbart shows the foundations of his system. The problems of inherence, change, continuity, and personal identity are to be settled by metaphysics. That is to say, we are to explain how a thing can be one and yet have many properties; how reality can change, or be one thing at one time and another thing at another time; how space and time can be divisible and yet continuous; and, finally, how we can have the consciousness of identity under all our various moods and epochs of growth.

Victor Cousin has told us that a philosopher in explaining a fact should not destroy the fact that he attempts to explain.

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[1] See Aquinas, *Contra Gentiles*, Cap. XIII; and *Summa Theologica*, Qu. II, Art. 3.

[2] Compare also his short *Encyclopedia of Philosophy* of 1831, § 226, Anmerkung.

In other words the explanation should end by showing how the fact is again re-established by the principle of explanation. But Herbart does not re-establish multiplicity in things, the reality of change, nor the continuity of space and time. He destroys them all; proves them to be illusions. Far worse than this, he proves the self to be a composite, and consciousness to be delusion: "The ego is a result of mental pictures (*Vorstellungen*) which unite and interpenetrate one another in a single substance." This "single substance" is the soul, which Herbart counts among the simple substances which have each only one quality and no self-activity. All finite things in time and space arise from the collisions of these "reals." Our intellects and our wills are not substances, but arise only from the mentioned collisions.

Thus Herbart adopts substantially the doctrine of Hume as regards our personal identity. What we call our individuality is only a result of the reaction of the ultimate atoms against one another.

Herbart therefore cannot admit will as belonging to the soul as an ultimate real. In fact he makes will to be a result of the third order of removal from the absolute real. First there are the real souls—inactive and devoid of all qualities except one—having neither intellect nor will nor love. Next Herbart supposes collision to take place and the souls to react against the attacks made on them. This reaction or self-preservation (*Selbsterhaltung*) produces mental images or representations. If we consider these, in their totality, to form the intellect, we shall explain, with Herbart, the feelings by assuming that the partial suppression of one representation by others gives rise to feeling. But the successful struggle of a representation against others that tend to suppress it, is desire. "Desire becomes will when it is accompanied with the supposition that the object of its wishes is attainable." The intellect is the first remove from the real substance; the feeling is the second; the will is the third. In his *General Pedagogics*, published in 1806 (Third Book, Chapter 4), he sums up a discussion of action (*Handeln*) by saying, "Therefore the deed creates the will out of desire."[3] we should say that the will creates the deed, but Herbart says that the deed creates the will.

It is interesting to note that Herbart must have been impelled to adopt his doctrine of real substances by reading the second chapter of Hegel's *Phenomenology of Mind*, published in 1807. That chapter treats of "Thing and deception," that is to say of the self-deception of the second stage of thought which tries to explain the contradiction of unity and multiplicity (thing and properties) by various suppositions; the first of these hypotheses being that the oneness is objective and the multiplicity subjective, or due to different senses (acid to the tongue, white to the eye, cubical to the touch, etc.). Finding this to be untenable, next it supposes the thing to be composed of different substances or materials, and not a unity except to the imagination of the beholder. Thirdly, another hypothesis is adopted, namely, that the things are each simple and have one quality and the multiplicity of properties arises through the relation of each thing to the others. Here we find Herbart's theory. The being for itself is simple and one—the being for others is multiple. Hegel shows however that this involves a new contradiction; for the simple quality itself is not determinate except in relation to others. Hence its being in itself is its being for others. This result Hegel recognizes to be the definition of *force*, and the mind has given up the explanation of the problem of inherence by the idea of thing and properties and adopted the idea of *force* as the explaining principle. Force exists essentially in its manifestation. Force acts or manifests itself if it exists. Here is a better explanation of the one and the many of experience. But Hegel goes on and proves that force presupposes self-activity as behind it—neither things nor forces could be were there not *will* beneath them in the universe. (See the third chapter of the *Phenomenology* for the discussion of force and the demonstration of self-activity.)

However this may be, Herbart stops at the doctrine of reals as beings in themselves, and makes the worlds of nature and of man to be the product of the mechanical action and reaction of these reals upon one another.

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[3] *Die That also erzeugt den Willen aus der Begierde.*

It is necessary to understand Herbart's views as to absolute reality in order to make clear his pedagogy. Even his doctrine of apperception with all its suggestiveness to the teacher,—who is to give attention rather to what the pupil understands than to what he merely sees and memorizes—even this doctrine is seized mechanically by Herbart as the reaction of a series of representations in the mind against the new idea entering through the senses. But the main business of Herbart, now that he had expressly excluded self-activity from the real substances, was to explain moral action or ethics. At the very beginning most people would see that this is entirely hopeless. If self-activity does not belong to the soul but only to some of its phenomena or accidental states (*Zustände*), morality cannot appertain to it. Quite different is Hegel's conclusion in the *Phenomenology of Mind.* For he finds that the insight of the Old Testament that God is a free person and essentially righteous and gracious is the arrival of man at absolute knowing. For so soon as one discovers that absolute being must be self-active or personal, and that to be absolute person it must be just and gracious, he has arrived at the highest possible insight—a knowing which must at the same time be true objectively.

Orientalism parts company with European thinking on this point. For all Oriental thought, except that of the Old Testament, makes the absolute to be something above (in fact below) personality, and above (below) righteousness and goodness, and all this because it makes pure, or empty, being, rather than self-activity, the characteristic of the divine.

Herbart could not but acknowledge the importance of ethical conduct in the world. Kant had filled the air with utterances on the sublimity of the free will and the dignity of virtue. Herbart repudiated Kant's "transcendental freedom," and for him there remained only the appearance or illusion of freedom.[4] For as self-activity does not appertain to the soul as real substance, of course the will cannot be self-determination, but only the false semblance of it.

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[4] See *Text-book in Psychology*, § 118.

And yet the ethical code must be followed. There remains but one way of securing ethical conduct, and that is by causing the soul to receive only ethical representations or to react on the new representations in an ethical manner. Hence the doctrine of interest. Herbart will have the child's interest aroused in ethical views of the world, notwithstanding that, according to his philosophy, all real being is above the ethical—for the ethical only appertains to self-active beings.

If we are in our consciousness and feelings only the battle-ground between new inflowing ideas and ideas already acquired, we are helpless in our morals until we have been made to acquire a stock of moral ideas. Then the moral ideas already filling our mind will meet the new ideas coming in from without and suppress whatever is antagonistic, or immoral, in them.

Interest, according to Herbart, has two sides, the interest of knowledge or cognition and the interest of sympathy or social co-operation (*Theilnahme*). Each of these has three subdivisions. The empirical, speculative, and æsthetic relate to knowledge; the sympathetic, social, and religious relate to co-operation. Under the empirical, he places natural sciences, languages, and sciences relating to man; under the speculative come mathematics, logic, metaphysics, physics, etc. Under æsthetics he includes the fine arts and poetry.

Here is a noteworthy attempt at co-ordination of studies. Herbart sees the importance of representing, in the course of study, all the essential provinces of human learning and of human conduct. Moreover, he distinguishes branches of instruction into the two grand divisions, those of history—including history and language,—and those of nature—including also mathematics.[5] This is a deep glance into the necessity of correlating the child with the world in which he lives.

Notwithstanding his denial of self-activity to real substances he often speaks of it as important to the pupil: "Interest is self-activity," "The pupil needs a many-sided self-activity." Freedom, too, is often spoken of as the one desirable thing. But he means freedom and self-activity only as phenomenal and not as essential attributes of the soul as real substance. So, too, the immortality of the soul is affirmed, and faith in God is declared essential. But the immortality of a soul without consciousness or will is the immortality of a nothing. God, too, does not create the "reals," but only their phenomenal disturbances.[6]

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[5] See his *Outlines of Pedagogy in Lectures*, 1835–41, §§ 37–49.

This doctrine of Interest has led the disciples of Herbart to various attempts to construct a course of study for elementary and secondary schools. Herbart himself laid much stress on Homer's Odyssey, Plato's Republic, Vergil's Æneid, and similar works. Ziller and Rein have contended for what they call "concentration of studies," arranging the subordinate studies about a central core of literature, Grimm's Fairy Stories, Robinson Crusoe, and the like—a procedure violently condemned by Stoy as excrescences on the Herbartian system.

It must be admitted that no scheme of concentration yet presented escapes wholly from the severe strictures of Stoy.[7] But they have been useful as compelling attention to the deep underlying question of educational values that so seriously occupied the attention of Herbart. The attempted subordination of history, geography, and arithmetic to literature leads immediately to the violation of the first of Herbart's well known "formal steps of instruction," namely, isolation and clearness. He demands that the pupil shall absorb himself in his subject, concentrating all his attention upon it—this is called *Vertiefung*. Then he shall correct his one-sided tendency by *Besinnung*, or the recoil from this specialization toward the opposite direction or that of general human interests, thereby recovering his sanity. The subordination of arithmetic and history to literature produces a neglect of what is peculiar to those branches—and hence they suffer in clearness. The result has been well described by Mr. Marble as "conglomeration" instead of concentration. I have never seen a course of study on the concentration plan that did not in some way show a serious want of balance: the neglect of the principle of variety for the sake of sanity (Herbart's *Besinnung*) has been noticeable.

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[6] See Falckenberg's excellent discussion of Herbart in his *History of Modern Philosophy*, pp. 516–536.

[7] See De Garmo's *Herbart and Herbartians*, p. 158.

But the ethical reason for these attempts at seizing the pupil's interest must never be lost sight of. They are attempts at developing a will as a derived result out of feelings and intellect. As such they are liable to exaggerations and extremes as remarked by Stoy. A sound psychology holds that the will is a primitive activity of the mind like the intellect and the feelings, and that it is to be respected and appealed to as such. It is always to be treated as something transcendental; namely, as always containing in itself the power of rejecting any and all interests in the world. The great Master, when tempted by the Evil One who offered Him the world and all its interests, replied in effect: "Take them and yourself away."

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Other contributions by Dr. Harris to the EDUCATIONAL REVIEW have been: Fruitful lines of investigation in psychology (January, 1891): Compayre's *Elements of psychology* (January, 1891); City school supervision (February, 1892); Herbart and Pestalozzi compared (May, 1893); Bowen's *Froebel and education through self-activity* (June, 1893); Report of the Committee of Ten (January, 1894).

VII

DISCUSSIONS

THE EARLY HISTORY OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE UNITED STATES

The introduction into American academic usage of the degree of Doctor of Philosophy marks the advent of a new influence upon American scholarship, the influence of the German method and spirit of scientific research. In the Middle Ages there seems to have been little distinction between the master and the doctor. The tendency, however, was for the doctorate to become the evidence of a more specialized learning. In England the term was finally restricted to the three learned professions, divinity, law, and medicine, while the master's degree was appropriated to proficiency in literature. This usage was transplanted to the American colonies. But both in England and Germany great laxity in conferring the degrees existed, and the master's degree, especially in Germany, lost credit. The doctorate of philosophy came into increasing use. The introduction of the degree into American academic life, then, is a part of the influence exerted by Germany upon our scholastic methods and the circumstances of its introduction are of great interest, inseparably connected as they are with the most distinguished names in American scholarship.

The first American student to be graduated at a German university was Edward. Everett, who received the doctor's degree at Göttingen in 1817. The degree first appears in an American college catalogue in 1821, when the Harvard catalogue contained the names of Joseph Green Cogswell, A. M., P. D., (this was the earlier abbreviation [1]), professor of mineralogy and geology, and librarian, and Rev. Edward Everett, A. M., P. D., Eliot professor of Greek literature. Dr. Cogswell had received the degree also at Göttingen in 1819. The next American graduate of Göttingen bore a name which he was to make perhaps even more distinguished than Everett's, George Bancroft, Harvard, 1817, Ph. D., Göttingen, 1820. George Ticknor studied at Göttingen with Everett and Cogswell, but was not graduated. Robert Bridges Patton, Yale, 1817, received the degree at Göttingen in 1821.

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[1] It will be remembered that Rev. Homer Wilbur, in 1848, among his most varied list of prospective academic honors, included "et P. D., Gött."

For some reason, which I have not yet discovered to my satisfaction, it was twenty-eight years before another Harvard graduate and twenty-three years before another Yale graduate received the doctor's degree at Göttingen.

One cannot help speculating upon the results for American scholarship if the example of Everett and Bancroft had been steadily followed. Probably our community was not ripe enough for such continuous and progressive absorption of German methods and results as has followed the resort to Germany for the last forty years. This second period begins with the eminent astronomer, Benjamin A. Gould, Harvard, 1844, Ph. D., Göttingen, 1848, who is followed by

George M. Lane, A. B., Harvard, 1848; Ph. D., Göttingen, 1851. Basil L. Gildersleeve, A. B., Princeton, 1849; Ph. D., Göttingen, 1853. Francis J. Child, Harvard, A. B., 1846; Ph. D., Göttingen, 1854. John Day Easter, A. B., Yale, 1850; Ph. D., Heidelberg, 1854. Jacob Cooper, A. B., Yale, 1852; Ph. D., Göttingen, 1854. William W. Goodwin, A. B., Harvard, 1851; Ph. D., Göttingen, 1855. T. G. Clark, S. B., Harvard; Ph. D., Göttingen, 1857. George C. Caldwell, S. B., Harvard, 1855; Ph. D., Göttingen, 1856. D. K. Tuttle, S. B., Harvard, 1855; Ph. D., Göttingen, 1857. William Watson, S. B., Harvard, 1857; Ph. D., Jena, 1862.

Again the tide turns, so far as Harvard and Yale are concerned. The next Harvard graduate of a German university received his degree in 1869, and the next Yale graduate his in 1872. Among the foreign scholars, resident in the country, who gave distinction to this degree, were: Francis Lieber, Ph. D., Jena, 1830; Louis Agassiz, Ph. D., Erlangen, 1829; Carl Beck, Ph. D., Tübingen, 1830; Arnold Guyot, Ph. D., Berlin, 1835.

My examination into this part of the subject necessarily lacks completeness, because it has been confined to Yale and Harvard, and yet, in all probability, this list is nearly complete.

These data are mentioned both from their interest in American college history and because they furnish the most satisfactory explanation of the introduction into American university life of a degree almost unknown in England. Yale was the first, or among the first, of American universities to propose to confer this degree, as it was for the most part conferred in Germany, for advanced work in literature or science, pursued in residence at the university. This step was taken in 1860. The requirements were stated as follows:

"It is required of candidates for the degree of Doctor of Philosophy, that they shall faithfully devote at least two years to a course of study selected from branches pursued in the department of philosophy and arts. . . All persons who have not previously received a degree furnishing evidence of acquaintance with the Latin and Greek languages . . . pass examinations in these languages or in other studies (not included in their advanced course) which shall be accepted as equivalent by the faculty. The degree of Doctor of Philosophy will be conferred upon all members of the department who, having complied with the conditions above stated, shall pass a satisfactory final examination, and present a thesis giving evidence of high attainment in the branches they have pursued." [2]

The first candidates to receive the degree were Eugene Schuyler, J. M. Whiton, and A. W. Wright. Between 1861 and 1890, inclusive, Yale conferred the degree upon 111 candidates. Something over one-half of these are, or have been, professors in colleges of high rank, and almost exactly two-thirds became teachers in colleges.

Harvard first proposed to confer the degree in 1871 under the following conditions:

"The degrees of Doctor of Philosophy and Doctor of Science have recently been established. The Academic Council, a body composed of the president, professors, assistant professors and adjunct professors of the university, conducts the examinations for these three degrees (these two and A. M.) and recommends candidates to the corporation in conformity with the following rules: The degrees of Master of Arts and Doctor of Philosophy are open to Bachelors of Arts (of Harvard and of colleges of like grade). . . The Academic Council will recommend for the degree of Doctor of Philosophy candidates otherwise properly qualified, who, after taking the Bachelor's degree, shall pursue at Harvard University for two years a course of liberal study, approved by the Council, in any of the following departments,—philology, philosophy, history, political science, mathematics, physics, or natural history—shall pass a thorough examination in that course, and shall present a satisfactory thesis. . . In special cases the Academic Council is authorized to remit the registration of residence at the university to Bachelors of Arts, or Science, of Harvard University, who are candidates for high degrees."

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[2] *Catalogue of Yale College*, 1860–61.

It was conferred first in 1875 on W. E. Byerly and C. G. B. Whitney.

Between 1873 and 1889 Harvard graduated fifty-six Doctors of Philosophy, a little over half of whom have become college teachers, and a very considerable proportion have achieved great distinction as specialists.

Johns Hopkins conferred its first doctorates in 1878, and by 1890 had conferred the degree upon 184 men. A very large proportion of them, over 150, have become college professors or teachers, or in twelve years one-half again as many as both Yale and Harvard put together in a period respectively of thirty and seventeen years.

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SEX IN MATHEMATICS

The pleasant little essays of M. Rebière on *Les Femmes dans la Science*, soon to appear in enlarged book form, and the equally pleasant essay by Mrs. Christine Ladd Franklin, in the *Century* for last October, on Sophie Germain, and the recent success of Miss Fawcett, and the labors of the late Mlle. Kowalevski,—all these stir up anew the question of the relative mathematical power of the sexes. But it is, after all, only a stirring up, not a settling; for isolated facts of history attract attention merely because they are so special. Neither can such a question be settled *ex cathedra*. A few years ago John Stuart Mill could speak as an oracle and say of women that "the general bent of their talents is toward the practical," but we are coming more and more to say of such statements, "Prove it." Nor can the question be settled at present by statistics, for none of our coeducational institutions have any considerable number of men and women who are taking the same work in mathematics and are, at the same time, subject to the same general influences. The women, relatively few in number, are often a more select class; the men often feel compelled to devote more time to physical sports; the struggle for a place in the higher institutions often requires women of more relative power than is necessary for men; or some one of a dozen other obvious influences operates in such a way as to make a comparison difficult.

This is true, however, rather of the higher institutions than of the lower. There is no reason why statistics made in the public schools, from the experience of a number of teachers of both sexes, should not show quite exactly the relative standing of girls and boys at various periods during the first twelve school years. This has been done, in a limited way, both in this country and in Germany. President Hall has given us the results[3] of the Berlin experiments with twenty thousand children who were just entering school, and of his own observations of a smaller number of children in the schools of Boston. From these it would seem that the girls excelled in space concepts, but the boys in number.

The present paper is intended to be a slight contribution in the same direction, but with an entirely different class of students, namely, those in Normal Schools. It is not intended that the paper shall stand for an argument as to the intellectual supremacy of either sex, for there are various modifying conditions to be considered in forming a judgment; but it forms a link in the argument, and as such it may have some value.

The first table is compiled from the results of some 10,518 written examinations set by the writer for his own pupils while in the State Normal School at Cortland, N. Y., and hence are affected by his personal equation. Of these examinations only about one-fourth were final, the rest being held at regular intervals during the year. The pass-mark was 75 per cent., and the passed papers were marked in ciphers the equivalent of 75, 80, 85, 90, and 95 per cent. This detail is, however, unimportant, since the young women and the young men were marked on the same scale, and only their relative standings are under consideration.

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[3] *Pedagogical Seminary*, I: 139.

Table I. Results of 10,518 *Written Examinations at Cortland*

Subject	*Number examined*		*Per cent. passed*		*Average standing of those passed*	
	Men	*Women*	*Men*	*Women*	*Men*	*Women*
Algebra 1	877	1630	57.1	57.4	83.6	83.8
Algebra 2	587	796	60.3	65.	82.3	83.5
Plane geometry	685	817	75.5	75.7	84.5	84.1
Solid geometry	411	523	70.1	66.1 *	83.3	83.7
Arithmetic	1265	2603	58.7	50.6	84.1	83.4
Trigonometry	154	170	83.1	82.4	83.1	83.1
General results	3979	6539	63.6	59.2	83.678	83.656

Subject	*Per cent. passed, arranged by fall and spring semesters*					
	Men			*Women*		
	Fall	*Spring*	*Gain*	*Fall*	*Spring*	*Gain*
Algebra 1	51.8	61.2	+9.4	56.4	58.2	+ 1.8
Algebra 2	57.2	61.9	+4.7	62.9	66.8	+ 3.9
Plane geometry	72.7	76.7	+4.	74.8	76.5	+ 1.7
Solid geometry	69.6	70.4	+0.8	72.3	61.7 *	—10.6 *
Arithmetic	56.1	61.2	+5.1	49.6	51.8	+ 2.2
Trigonometry	82.1	83.9	+1.8	79.2	85	+ 5.8
General results	59.7	66.3	+6.6	58	60.4	+ 2.4

Subject	*Average standing of those passed, arranged by fall and spring semesters*					
	Men			*Women*		
	Fall	*Spring*	*Gain*	*Fall*	*Spring*	*Gain*
Algebra 1	83	83.9	+0.9	83.4	84.2	+0.8
Algebra 2	81.7	82.6	+0.9	83.3	83.7	+0.4
Plane geometry	84.6	84.4	—0.2	84.5	82.4	—2.1
Solid geometry	82.9	83.5	+0.6	82.7	84.4	+1.7
Arithmetic	84	84.3	+0.3	82.8	84.2	+1.4
Trigonometry	83.3	82.9	—0.4	83.1	83.2	+0.1
General results	83.5	83.8	+0.3	83.1	84.1	+1

* This violent break is the result of exceptionally weak classes of young women, in solid geometry, during two spring semesters.

From this table it appears that about 63.6 per cent. of the young men passed their examinations, while 59.2 per cent. of the young women passed; and that of those who did pass, the average standing of the two sexes was practically the same, 83.678 per cent. for the young men and 83.656 per cent. for the young women. In algebra the women stood higher than the men, and more of them passed the subject. In geometry, however, the difference is in favor of the men, although in all but two or three semesters the women averaged as high, or higher. In arithmetic, where the largest number of examinations (nearly 4000) were held, the men stood noticeably higher in every respect, and it was here that they gained their chief advantage in the final average. In trigonometry, where only 324 examinations were held (all final examinations), the honors were about even.

The latter part of Table I was prepared to show the relative growth and staying powers of the sexes. At first thought one might say that a student would stand higher in his mathematics in the fall, fresh from his vacation, than in the spring, when wearied from a half-year's work. Such, however, is not the case. The drill, the active training of the mind, during the earlier part of the school year bears fruit in the latter half. In every subject save plane geometry (with an exception in solid geometry above noted), students stood higher, and more of them passed their examinations in the spring than in the fall. But in plane geometry both men and women attained lower standings in the spring, although, even then, more of them passed the subject. The reason for the lower standing may be that the subject is new, and that it seems so radically different from arithmetic and algebra that the fall training is not sufficient to counterbalance the spring weariness. As to the relative gain, the women who passed stood 1 per cent. higher than in the fall, while the men gained only 0.4 per cent., but as to the relative number who passed the subject the men gained 6.6 per cent. while the women gained only 2.4 per cent.

Table II gives the corresponding results computed from 9307 final examinations as recorded on the books of the Michigan State Normal School. These represent the work of nearly four times as many students as those of Table I, because the examinations were all final, held at the close of each semester instead of eight times a year. In these statistics the personal and sex equation of the examiner enters only slightly, for the teaching corps of the mathematical department has been and is composed of about an equal number of men and women, and has been a changing body. The table is not as complete as Table I, it being impossible to obtain the separate standings for fall and spring, or the list of failures to pass. The records of the institution having been twice destroyed by fire, the present books cover only a portion of the forty-six years of the school's history.

Table II. Results of 9307 *final written examinations at Ypsilanti*

Subject	Number examined		Average standing of those passed	
	Men	Women	Men	Women
Preparatory arithmetic	85	175	84.7	84
Algebra 1	465	810	85.6	85
Algebra 2	291	489	85.3	85.1
Algebra 3	179	310	86.1	86.3
Plane geometry	385	584	86.0	84.6
Solid geometry	313	322	86.8	85.6
Teacher's review of arithmetic	902	119	84.5	84.4
Professional training, arithmetic	475	1270	86.5	86.7
Calculus, trigonometry, etc.	228	105	86.2	87.8
General results	3323	5984	85.61	85.26

Here, as in Table I, the average standing of the two sexes differs very little, the difference being again in favor of the young men, who stand 85.61 per cent., while the young women stand 85.26 per cent. In algebra the standing is also very even, the difference being in favor of the men, although the women make a better showing in the third semester. As in Table I, the young men stand higher than the young women in geometry and in arithmetic. In the higher mathematics the women stand materially higher, but the numbers were small, and classes were always taught by a man, so that the sex equation of the examiners is not eliminated as in the other statistics.

In general it may be said that, judging by the twenty thousand examinations here considered, the young men attain a higher standing; that more of them pass their examinations; and that they make their greatest gain in arithmetic and geometry, merely holding their own or losing in algebra. If girls excel in space concepts when they enter the first grade, they seem to lose their supremacy, or to be relatively less successful in combining those concepts with logical demonstration, when they attain young womanhood. It may further be said that as to growth and staying power, during the year, the young men make a greater showing, on the whole, than the young women do.

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VIII

REVIEWS

Report of the Commissioner of Education for the year 1891–92—Washington: Government Printing Office, 1894. 2 vols. 1292 p.

The appearance of these bulky volumes again raises the question that many intelligent teachers are continually asking, whether their value would not be greater if they were less comprehensive and more compact. In their present form they are an encyclopedia rather than a report. Of the 636 pages in the first volume, only 72 deal with matter that, strictly speaking, belongs in a report. In the second volume 312 pages are given to necessary and valuable statistics, 20 to education in Alaska, and about 100 to analysis and discussion of statistics; leaving over 600 pages that contain discussions and monographs that are, strictly speaking, foreign. It would seem, therefore, as if a single volume of 600 pages would suffice for an annual report of the Commissioner.

No fault can be found with most of the additional matter. It is, as a rule, well prepared and interesting, though often far from being well written. But different parts of it interest different people, and if brought out in small monographs from time to time it would really be more useful than when packed into these large volumes. For instance, Dr. Klemm has translated Paulsen's introductory sketch prepared for Lexis's *Die deutschen Universitäten*—a piece of work, by the way, that suffers sadly by comparison with the accurate, idiomatic, and elegant translation by Professor Perry; this would be far more serviceable in monograph form. The same remark applies to Mr. Boykin's historical sketch of physical training in education.

Dr. Harris's direct personal contribution is an introductory chapter of 38 pages. He shows that 22.69 per cent. of the population, or 14,714,933 persons, attended some school, public or private, for a longer or shorter period during the year ending June 30, 1892. Over 300,000 more were enrolled in evening schools, schools of art and industry, business colleges, schools for defective classes, and Indian schools. For the six years preceding 1892 the average annual increase in school enrollment was about 250,000. Of the total enrollment, 96.27 per cent.—14,165,182—were enrolled in elementary schools; 2.73 per cent.—402,089—were in secondary schools; and 1 per cent.—147,662—in institutions for higher and professional education. These figures indicate alike the strength and the weakness of our system. The schools do not really educate the masses of the population; they do not, because they cannot hold them long enough. It is of great importance that school superintendents and directors, both urban and rural, should study systematically the facts regarding the withdrawal of children from school, and ascertain, if possible, the causes operating to bring about withdrawal. In this connection the remarks of Dr. Harris (from his St. Louis report of 1878-79) and the letter of Professor Woodward, printed on p. 595 and following of the present report, are very valuable.

For the work of elementary education the public school is almost wholly depended upon, only 8.46 per cent. of the pupils at the elementary stage being in private schools. For secondary and higher education, on the other hand, private foundations and private initiative are called upon to play a much larger part; for 38.41 per cent. of the pupils in secondary schools are in private institutions, and 64.61 per cent. of those in institutions for higher education are in the same category.

A full school year ought to indicate about 200 days of actual teaching. The average for the United States is steadily rising and is now 137.1 days. Dr. Harris estimates that on the present basis every inhabitant is receiving an average of about 4.3 years of instruction, the year being taken at the full 200 days. The public schools of the country cost, for maintenance, $155,991,273, an average of $14.80 for each pupil.

To enter into any extended examination or discussion of the special treatises included in the report is unnecessary. They are invaluable, although the suggestion made above as to the form of their publication is certainly worthy of serious consideration.

N. M. B.

Die Medicinische Wissenschaft in den Vereinigten Staaten—VON DR. PLACZEK. Leipzig: Georg Thieme, 1894. 125 p. Price 4 Marks.

Two important books have appeared within a few weeks bearing on medical education in the United States. The first of these—Dr. Baudouin's report to the French government—is an encyclopedic study of our medical institutions. The second is by Dr. Placzek of Berlin. The German book is less exhaustive but more critical than the French. Dr. Placzek, like Dr. Baudouin, visited the United States during 1893. How long he remained is nowhere stated; even the institutions visited are not specifically named, but incidentally one learns from the book that he saw most of the hospitals, insane asylums, and medical schools in New York, Pennsylvania, Ohio, and Illinois. With our hospitals he was well pleased. The generosity of the state and the munificence of private individuals everywhere surprised him. The buildings were always fine; the furnishings abundant and costly; the patient's comfort considered at every turn; there were pictures on the walls, flowering plants in the windows, and singing birds in cages; the hospital library was well stocked with suitable books; there were great grassy lawns where the patients could exercise and sun themselves in summer, and beautiful glass-walled palm gardens for the winter. The administration of the hospital was usually good. The "Board of Visitors" seemed to have some excellent features. Physicians representing the various specialties in medical science were usually found on the consulting boards. But the feature in the administration that he did not like was the placing the administration of hospitals under the general direction of a layman,—a superintendent,—and subjecting professional men to lay authority. These lay superintendents he generally found conscious of their authority, and often using medical phrases and technical terms with a pronunciation and inaccuracy that provoked laughter. The training schools for nurses connected with many of the hospitals seemed to him most admirable. He found the instruction thorough and the work of the nurses efficient, and he commends the system to Germany.

Our insane asylums and medical schools did not please him so well. In buildings and equipments, he thought our insane asylums in advance of most European institutions. The plan of the new asylum building at Bloomington, Ill., seemed to him ideal, and he incorporated it with full descriptions in his book. But the weak point in our asylum system was the physician, and with him the assistant physicians and the caretakers. The asylum physicians in America are chosen from among general practitioners, and lack that special training so essential for the cure and care of the mentally diseased. The medical schools, for the most part, give little instruction and training in neurology and psychiatry, without which an understanding of the insane is quite impossible. Dr. Peterson in New York and Dr. Rohé in Cantonville are doing what they can to give these important studies proper consideration in their schemes of medical education, but the neurological laboratories of both are characterized by Dr. Placzek, as a mere appendix and not an organic part of the medical college. The American people generally recognize this deficiency of medical culture, a fact which enables the daily press to injure very materially the best work of the asylum physicians. A lay reporter is permitted to print columns of sensations involving asylum practitioners and their best medical efforts; and physicians must spend all too much of their time being "investigated," for journalistic allegations. The system of selecting care-takers seemed to the author obviously wrong. Too often persons without character or fitness receive such appointments. In one institution with 169 care-takers, 93 had to be dismissed during one year for insubordination and ill-treatment of the patients.

With the medical schools, the number 135 astonished him. Competition and the longing for the "almighty dollar" seemed to play too great a part in the organization and management of these institutions. The men who do the teaching are too young—in the West he found so-called professors from twenty-three to twenty-four years old. The students enter the medical college with a minimum of training—they often know no language but their own, and that not always well—and the medical course of two or three years is too short, although some of the better colleges are proposing an extension to four years. A nineteen-year-old physician would provoke laughter in Germany, but Dr. Placzek reports nine such in the United States and eighty-one who are but twenty. The following are his summarized criticisms of the American medical colleges: 1. Lack of general culture as a requirement for admission; 2. The importance attached to theoretical instruction; 3. The deficiency in clinical instruction; 4. The lack of hospital practice; 5. The shortness of time devoted to the study.

In spite, however, of inadequate medical instruction, Dr. Placzek does not leave his readers with the notion that the physicians are, as a class, uncultured and underlings. The later life and larger American experience do much toward supplementing what the medical college fails to give. Then, there are city and county and state and national medical associations, where the physicians meet at stated intervals for instruction and discussion. In some cities there are large medical libraries established by the local physicians. In Philadelphia, for instance, he found such a library with forty-seven thousand volumes and twenty thousand pamphlets. All these agencies deepen and broaden the intellectual range of the American physicians.

On the whole the tone of the book is judicial. One might wish that he had omitted the quotations from the catalogues of "cheap medical colleges." institutions which have no standing in America—and given some special consideration to the really strong departments of medicine in our universities—in Harvard, Johns Hopkins, Pennsylvania, and Columbia (College of Physicians and Surgeons), for example. He fails, too, to note our graduate schools of medicine and the influence of women in the medical profession, the latter an especially American feature of medical life. This feature greatly impressed Dr. Baudouin and it must have been the more striking to Dr. Placzek, considering that there are twenty-five hundred women practicing medicine in the United States as against but six in Germany.

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The Elements of Ethics—By JAMES H. HYSLOP, Ph. D., Instructor in Ethics, Columbia College. New York: Charles Scribner's Sons, 1895. 470 p. $1.50.

In view of the prevalence of ethical speculation among English and American thinkers, and the high rank which British moralists have reached, it is a curious fact that our manuals of ethics have been so uniformly defective. As one thinks over the text-books of the last generation—Wayland, Hopkins, Porter, for instance—his reverence for the personal worth of their authors, and his admiration for their practical pedagogical skill, are often mingled with a sense of theoretical, or even philosophical, inadequacy. Calderwood's handbook, it is true, now bears "fourteenth edition" on its title-page, but the legend arouses wonder at the negative value of its competitors, rather than at its own positive excellence.

In recent years, however, a number of scholars, prominently the younger men, have endeavored to fill this gap in our pedagogical library. Many names occur at once to the philosophical teacher—as Robinson, Dewey, Bowne, Murray, Mackensie, Muirhead, and latest of all, Seth and Hyslop. In this goodly company Dr. Hyslop's work will, for the future, entitle him to an honorable place. It is the work of a practical teacher; it is the outcome of thought as well as of experience; it recognizes the historical standpoint; it is careful, and for the most part, moderate; it is catholic in its treatment of ethical problems; and while it deals chiefly with theoretical ethics, the author has more than once found opportunity to point out the lines which unite theory with conduct. The book opens with an introduction, which is followed by an historical account of the origin and development of ethical speculation. Chapters iv–v, covering more than a quarter of the whole, are devoted to the problems of the will and responsibility, which the author solves in the sense of a moderate libertarianism, though he rejects the "liberty of indifference." Chapter vi considers the nature of conscience and shows Dr. Hyslop's patience and analytic skill at their best. A long discussion of the genesis of conscience then brings a decision in favor of "general," but not "particular," intuitionalism, with, as its reverse, an emphatic negation of the ability of empiricism or evolutionism to explain the origin of the moral germ. Chapter viii, on "The theories and nature of morality," includes a sharp criticism of utilitarianism and the author's conclusion that the moral ideal must be conceived synthetically, with both happiness and perfection as factors, though the tendency of his thinking seems to be to lay stress on the second of these as the more important. The work ends with an account of the relations of religion and ethics, and a chapter on the "Theory of rights and duties."

The chief defect of Dr. Hyslop's manual is a certain lack of proportion. He begins by giving us so much that at the end he is forced into undue compression. We are grateful for his history of ancient and mediæval ethics, but cannot but regret that his historical chapter closes with Hume and Kant. The psychology—static and genetic—of conscience again is, perhaps, his best piece of work; but no one would repudiate sooner than Dr. Hyslop himself the doctrine that the psychology of ethics is to be the criterion of ethical theory. Yet the discussion of the nature of morality finds room for nothing but passing references to the changes wrought by evolution in the *metaphysics* of hedonism, and for no account of the ethics of metaphysical idealism whatever; while intuitionalism is dismissed as "gnosiological," and the writer's own perfectionism itself gets scanty justice.

As a whole, however, there are few works which will be more welcome than this to the instructor in ethics; and the author will have abundant opportunity to file and polish in the later editions which will surely be called for.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

Mr. Edward Clodd, whose *Story of creation* is well known, has prepared a brief *Primer of evolution*, which teachers and students alike will find an admirable outline of the facts of evolution as well as of the evidence by which the theory is supported (New York: Longmans, Green & Co., 1895, 186 p.).——One of the most brilliant works of our time is *Les origines de la France contemporaine*, by M. Taine. Professor Edgren has made an attractive series of selections from this great work that students of French and of history will find very useful (New York: Henry Holt & Co., 1895, 157 p. 50 cents).——Heath's Modern Language Series has been enlarged by the addition of a collection of *Kleine Geschichten*, edited by Dr. Bernhardt of the Washington schools (Boston: D. C. Heath & Co., 1895, 90 p. 30 cents).——Mr. Robert N. Corwin, a graduate of Yale, has taken his doctorate at Heidelberg, submitting as his dissertation a paper entitled *Entwicklung und Vergleichung der Erziehungslehren von Locke und Rousseau* (Heidelberg: Carl Pfeffer, 1894, 115 p.).——An elaborate and beautiful *Manual for the study of insects* has been prepared by Professor Comstock of Cornell University, and will be found extremely useful as a work of reference by all those who are interested in entomology and by teachers who are striving to do something with elementary science in the schools (Ithaca, N. Y.: Comstock Publishing Co., 1895, 701 p. $3.75).——The first two parts of a new *Corpus Poetarum Latinorum*, edited by Dr. T. P. Postgate, have appeared and will supplant the old work of Walker when the two remaining portions shall have been completed. The present volumes contain the lives of Ennius, Lucretius, Catullus, Vergil, Horace, Tibullus, Propertius, and Ovid, prepared by Dr. Postgate from the Latin recensions of L. Müller, Nettleship, Munro, Hiller, Palmer, and others, with a list of the chief variants in the margin. For classical scholars the convenience of this work is sufficiently manifest, and because of it they may be willing to forgive Dr. Postgate for postponing on its account the very greatly needed dictionary of Latin etymology, which has so long been promised and so unreasonably delayed (New York: Macmillan & Co. $6.50).——Professor F. W. Warren's *History of the novel previous to the seventeenth century* will be eagerly welcomed by all students of comparative literature who deplore the dearth of any scientific work in English upon this very interesting subject. Professor Warren writes of the general development of fiction, sketches somewhat too briefly the history of the Greek novel, and then passes to the very different subject of the mediæval tale, the legends, the myths, and the work of the *trouvères*, and expounds at length the influences that have affected the forms of the modern romance. The book has a good index and a bibliographical appendix (New York: Henry Holt & Co. $1.75).

IX

EDITORIAL

The princely gift of one million dollars to Columbia College by President Low is not only unique in the history of education, but is one of the most significant events that the annals of higher education record. The more thoroughly the facts are known, the more clearly will this be seen. Columbia is about to remove from its present location, selected forty years ago as a temporary makeshift, to one of the most commanding sites that any of the world's great cities can boast. To purchase this site, and to provide the necessary buildings, several millions of dollars are necessary, and, if the institution is not to be hampered in its work, they must be promptly forthcoming. Nearly one million dollars had been pledged for this purpose when the period of financial stringency and commercial depression, from which we are just emerging, began. For two years it has been extremely difficult to raise large sums of money for any purpose, however pressing. Yet it was out of the question that Columbia's manifold activities should be suspended, or even curtailed. The plans that had been so carefully formulated must be carried out. These plans involved the removal of the college to its new home in 1897 or 1898, and the first desideratum was the erection of the magnificent library, about which the life of the university is to center, and which is to be the dominating architectural feature of Morningside Heights. To build this structure as it has been planned will cost at least one million dollars, and it is this great burden that President Low has lifted from the shoulders of the corporation.

Since 1890 Columbia has received in gifts between five and six millions of dollars. It needs as much more to enable it to carry forward, adequately and efficiently, the work that it has in hand. President Low's gift, coming as it does from one whose judgment commands the respect of the country and whose knowledge of Columbia's pressing needs is, of course, most intimate, must have the effect of stimulating others to follow his example, and before long we shall doubtless see the great metropolitan university endowed and housed as it should be. Columbia has always suffered by reason of the general impression that she is immensely wealthy and in need of nothing. President Barnard's appeal for funds, made in 1883, did something to dispel this illusion, but the gifts and bequests of Charles M. De Costa, Hamilton Fish, President Low, and W. C. Schermerhorn—all of whom, are, or were, members of the corporation—have swept it away absolutely.

The expense of maintaining a modern American university is enormous. Both at Harvard and at Columbia the salaries paid to the teaching force are smaller, whether measured absolutely or relatively, than those paid at some other institutions; yet both Harvard and Columbia are now spending three-quarters of a million annually for current expenses. It is interesting to notice that of the eighteen needs specified by President Barnard in 1883, Columbia has since been able to make provision for fifteen, although these are not all endowed as President Barnard hoped that they would be.

The struggle for public-school reform in the City of New York, which was vigorously carried on from the opening of the political campaign in September, 1894, until, by the action of the State Senate, it was lost, for the time being, on April 25, 1895, is so important, and the factors that entered into it were so significant, that a summary of it ought to be of interest to the country at large.

One of the planks in the platform of the Committee of Seventy, on which New York was wrested from the control of Tammany Hall in November last, pledged the reform party to the improvement of the material and educational conditions of the public schools. Immediately after the election was won a sub-committee of five was designated to consider and report how the pledge of the platform in this respect could best be fulfilled. The members of this sub-committee were: Stephen H. Olin, Henry L. Sprague, John B. Pine, Nicholas Murray Butler, and William W. Locke. All of them have been students of public-school questions for years, and Mr. Sprague had served with distinction on the board of education. Several other members had been tendered appointments to the board by Mayor Hewitt during his term, but declined to serve.

So far as possible, it was the desire of the Committee of Seventy to bring about the needed municipal reforms by competent administrative officers, without appeal to the legislature for aid. But in several departments, of which the school system was one, this proved to be impossible. Not only is that system riddled with politics, but by its very organization it is so complex and antiquated that direct responsibility and efficient administration, either business or educational, are out of the question. It was a surprise to many persons, even in New York, to find that there is there no such thing as a city school system. There are, instead, twenty-four ward school systems—relics of the old district system—presided over by local school boards called ward trustees. These trustees are, as a rule, utterly unknown and insignificant persons, often active local politicians, and not always, it is believed, above preying upon the schools. These local school boards have the initiative in many important matters, and appoint all teachers and principals. Collectively they spend enormous sums of money in salaries and repairs, and they are utterly irresponsible. They are appointed by the board of education, and it is largely owing to the Tammany-ridden character of that board that the trustees have fallen so low in recent years. In addition to this fundamental and insurmountable defect in the system, there are many others that need not now be recited, for they are generally to be traced to this administrative irresponsibility. So obvious had these defects become, that in 1893, before the present reform movement was organized, application had been successfully made to the legislature for a commission to propose a revision and codification of the school laws. Mayor Gilroy designated as members of the commission, E. Ellery Anderson, a prominent lawyer, who had served for fifteen years as trustee or school commissioner; David McClure, also a well-known lawyer; Oscar S. Straus, formerly minister to Turkey; Thomas Hunter, president of the Normal College, and all his life an officer of the school system; and Stephen H. Olin, afterward chairman of the subcommittee of the Committee of Seventy. This commission made a long and patient investigation. They held public hearings, and every shade of opinion and interest was represented before them. As a result they framed a bill reorganizing the school system, which reached Albany too late to receive consideration from the legislature of 1894.

In view of the fact that the bill of the commission had been framed with great care by men thoroughly informed as to the conditions and needs of the New York schools, it was taken up and studied, line by line, by the Seventy's sub-committee. It was found to be not an ideal measure, but a thoroughly practicable one, which embodied the reforms that were most needed. After careful consideration and in view of the fact that this bill had commended itself to the press of the city, and to public opinion generally, it was, with a few minor changes, adopted by the sub-committee and recommended to the Committee of Seventy. This body approved the bill, through their executive committee, and it was introduced into the Assembly by Mr. Pavey of New York. The bill was thus described by the *Evening Post* of December 28, 1894:

> The bill which this thoroughly competent committee recommends is designed to fix responsibility by concentrating power. It does away with inspectors, remodels the boards of trustees and changes their functions, leaving them merely powers of visitation and inspection, and retains the board of education with enlarged powers and diminished labor. It provides for a board of twenty-one commissioners, who are to be appointed by the Mayor, but who, instead of having all the work to do personally, will delegate it to a board of twenty division superintendents, who are to be a permanent paid body of trained experts, fitted by professional acquirements for their several duties, and working under a city superintendent who will have full control of the educational administration of the schools. . . In short, the bill aims to take the management of our schools out of the hands of ignorant and incompetent men, mainly politicians who have no other conception of any position than to use it for all that it is worth for politics, and put it under the control of men who will give us an educational system abreast of the times—that is, one in accordance with the demands of modern civilization. . . It is not an experimental measure, but one which will take the city out of the slough of barbarism in its educational methods and bring it on a level with the other cities of the country. . . Nobody wishes to see the present system preserved except the Tammany rascals and incompetents who have either administered it or profited by it.

Every leading newspaper of New York indorsed the bill in similar fashion, as did the City Club, the Council of Confederated Good Government Clubs, the Women's Association for Improving the Public Schools, and a dozen other bodies. But early in its legislative career the bill began to meet with opposition from two sources: the advocates of a silly and blundering measure introduced by Assemblyman Bell, and the followers of Platt, the Republican legislative boss. The Bell bill provided for a school commission of five members, each to be paid a salary of eight thousand dollars a year for a term of ten years. The handful of persons who had designated themselves in advance as the most suitable ones to pick these political "plums," argued in behalf of the Bell bill with becoming gravity and sanctimoniousness. Their bill, however, was favored by nobody except themselves, and had no chance from the start. It was used, however, adroitly and unscrupulously, to delay and defeat the Pavey bill. Several weeks of the session passed away, and then the opposition of the followers of Platt manifested itself. These men were in open alliance with Tammany, and naturally any measure to take the schools out of politics and place them under the control of professional men and women was abhorrent to them. Meanwhile, however, public opinion in New York was crystallizing in support of the bill. The newspapers of every shade of political opinion—especially the *Evening Post*, *Tribune*, *Times*, and *Sun*—demanded its passage. At two great mass meetings, held in Cooper Union on February 4 and March 27, strong resolutions were adopted calling for the prompt enactment of the bill into law. Finally, the strong pressure of public opinion made itself felt in the Assembly, and on April 17, despite the frantic protests of Tammany Hall and its Platt allies, the bill passed by a vote of 77 to 37. To the persistence and unselfishness of Assemblyman Pavey, and to the aid of Speaker Fish and Assemblymen Ainsworth, Wilds, Percy, Sanger, Niles, Horton, and Wilcox, this result was due. The outlook was now very favorable, despite the fact that the Platt-Tammany alliance was in full force in the Senate. The bill reached the Senate on April 18, and was referred to the Cities Committee. The mercenary and obstructive elements in the school system were now in the last ditch, and they redoubled their efforts. The first weapons they seized upon were misrepresentation and vilification. The story was started that the members of the Seventy's sub-committee were all to profit by the passage of the bill; that it was an attempt to introduce (!) politics into the schools; and that one purpose was to annoy and perhaps discharge the teaching staff. By dint of hard work and some lively flights of the imagination, the political leaders of the school machine—including trustees and principals alike—managed to bring about a genuine state of panic among the teachers. This was manifested at a largely attended meeting held on April 18, in response to a vulgar and flaring notice issued by the ring through its chief agents. So preposterous were the statements made to the teachers at this meeting that the Women's Association for Improving the Public Schools issued an invitation for a meeting of the teachers on April 23, to have the bill "adequately and fairly presented." In respect to this meeting the ringsters overreached themselves. Conflicting orders were issued. The first command was to boycott the meeting; the second was to break it up by interruptions and disturbance. About six hundred teachers responded to the invitation, and the disturbance began at once. The reports of the meeting, as printed in the daily papers, showed conclusively that ignorance, vulgarity, and insolence have a far stronger representation among the four thousand teachers of the city than had been supposed. The conduct of their representatives on this public occasion more than justified the worst that had ever been charged against them. The speakers, even Mr. Ellery Anderson and Dr. Hunter, were continually interrupted and insulted. One principal, not satisfied with generalizations, took occasion to insult Mr. James B. Reynolds, school trustee of the Tenth Ward (but a strong supporter of the reform bill), to his face. The reports of the entire proceedings, as printed in the newspapers of April 24, opened the eyes of thousands of people to the true character of many of those who are controlling the city's educational system.

This demonstration by the teachers was seized upon by the Platt-Tammany alliance to help the fight against the bill, and as the result of the personal efforts of Platt's lieutenants, the Senate committee reported the bill adversely and the Senate concurred in the adverse report, by a vote of 21 to 6, on April 25. This ended the fight for the present.

The sentiment of the city is such, however, that this defeat is only the Bull Run that points the way to an Appomattox. On the one side are arrayed the intelligence and the public spirit of the city (and a fair share of the teachers themselves); on the other, are the local school trustees, the petty politicians of both parties, the majority of the principals (who fear the effects of competent supervision), and the scores of incompetent teachers. Between these two elements the struggle may be prolonged, but the outcome cannot be uncertain.

If the schools of New York had ever been really supervised, or if there were a city system and not twenty-four ward systems, the teachers could not have been deceived and misled as they were. But they simply do not know how efficient school systems are organized and conducted. To gain the sympathy of these teachers, to inform them and widen their horizon, is one of the first and most useful steps that the reform party can take. There are not wanting indications that, when the bill is again proposed, the hundreds of intelligent and self-respecting teachers in the city will not submit to being misrepresented, but will declare for the reform measure at whatever cost to themselves.

State Superintendent Skinner of New York has begun well. His appointment of Mr. A. S. Downing as inspector of training classes has given great satisfaction, for it insures a sound and progressive policy in that very important department. Mr. D. E. Ainsworth brings to the post of deputy superintendent high character and a mind trained by long and honorable legislative service, as well as that very useful thing, a wide acquaintance, which public service often brings with it as a partial recompense for the disagreeable and trying experiences that it entails.

Mr. Skinner has also shown both courage and good judgment in opposing vigorously before the Governor a mischievous bill that was passed by the Legislature, entitled, "An act to amend the consolidated school law providing for the study of the nature and effects of alcoholic drinks and other narcotics in connection with physiology and hygiene in the public schools." While in entire sympathy with the object sought to be gained by the bill, Mr. Skinner had no difficulty in showing it is unnecessary; that it interferes with established methods of teaching; and that it was forced through the Legislature by strangers without a single school officer asking for it or urging its passage. It is earnestly to be hoped that Governor Morton will listen to Mr. Skinner's strong argument and veto the bill. It is one of those vexatious and meddlesome measures of interference with school work by which the so-called friends of temperance betray their intemperateness and injure the cause whose success they have at heart.

A very important addition to the educational forces of the country is the newly established school of pedagogy at Buffalo. This school will open in September, under the direction of an able faculty, at the head of which stands Professor Frank M. McMurry, whose name is sufficient guarantee that the new institution will have high aims and use scientific methods. The school is designed for advanced students of teaching, especially superintendents, principals, and highly trained teachers. Its course of study will cover two years. The success of this wisely planned institution may safely be predicted from the start.

EDUCATIONAL REVIEW

SEPTEMBER, 1895

I

WHAT KNOWLEDGE IS OF MOST WORTH?[1]

The student of history is struck with the complexity of modern thought. From the dawn of philosophy to the great Revival of Learning the lines of development are comparatively simple and direct. During that period one may trace, step by step, the evolution of the main problems of thought and action, and discover readily how the theories of the seers stood the test of application by the men of deeds. At Athens during the great fifth century the inner life was the chief part of life itself. In that age of the world life was simple; and often, because of its refinement and independence, more reflective than with us. Men's ideals were more sharply defined and more easily realizable. They did not doubt that the world existed for them and their enjoyment. Even that advanced stage of human culture of which Dante is the immortal exponent, believed, as Mr. John Fiske says,[2] that "this earth, the fair home of man, was placed in the center of a universe wherein all things were ordained for his sole behoof: the sun to give him light and warmth, the stars in their courses to preside over his strangely checkered destinies, the winds to blow, the floods to rise, or the fiend of pestilence to stalk abroad over the land—all for the blessing, or the warning, or the chiding, of the chief among God's creatures, Man." With such a conception as this, theory and practice could be closely related. In the ancient world it was not unusual to find the thought of the disciple guided implicitly by the maxim of the master. *Γνῶϑι σεαυτόν* and *Nil admirari* were preached by the early philosophers in the confident belief that they could be practiced by him who would.

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[1] Presidential address, delivered before the National Educational Association, at Denver, Colo., July 9, 1895.

[2] *The destiny of man* (Boston, 1893), p. 12.

In these modern days all this is changed. Man has come to doubt not only his supremacy in the universe, but even his importance. He finds that, far from dwelling at the center of things, he is but "the denizen of an obscure and tiny speck of cosmical matter quite invisible amid the innumerable throng of flaming suns that make up our galaxy." A host of new knowledges has appealed to human sympathy and interest, and has taxed them to the utmost. Galileo with his telescope has revealed to us the infinitely great, and the compound microscope of Jansen has created, as out of nothing, the world of the infinitely small. Within a generation or two biology has been created, and physics, chemistry, and geology have been born again. The first wave of astonishment and delight at these great revelations has been succeeded by one of perplexity and doubt in the presence of the wholly new problems that they raise. The old self-assurance is lost. Men first stumble, blinded by the new and unaccustomed light, and then despair. The age of the faith and assured conviction of Aquinas was followed by the bold and cynical skepticism of Montaigne; and this in turn—for skepticism has never afforded a resting-place for the human spirit for more than a moment—has yielded to the philosophy of disenchantment and despair of a Schopenhauer and the morbidly acute and unsatisfying self-analysis of an Amiel. Already it is proclaimed by Nordau and his school that we are in an age of decadence, and that many of our contemporary interpreters of life and thought—Wagner, Tolstoi, Ibsen, Zola, the pre-Raphaelites—are fit subjects for an insane asylum. Mankind is divided into warring camps, and while electricity and steam have bound the nations of the earth together, questions of knowledge and of belief have split up every nation into sects. From all this tumult it is difficult to catch the sound of the dominant note. Each suggested interpretation seems to lead us further into the tangled maze, where we cannot see the wood for the trees. Standards of truth are more definite than ever before, but standards of worth are strangely confused, and at times even their existence is denied.

Amid all this confusion, however, a light has been growing steadily brighter for those who have eyes to see. In our own century two great masters of thought have come forward, offering, like Ariadne of old, to place in our hands the guiding thread that shall lead us through the labyrinth—the German Hegel and the Englishman Herbert Spencer. And as the century closes, amid the din of other and lesser voices, we seem to hear the deeper tones of these two interpreters swelling forth as representative of the best and most earnest endeavors, from two totally different points of view, of our human seekers after light. Each has taken the whole of knowledge for his province, each has spread out before us a connected view of man and his environment, and each would

> ". . . assert Eternal Providence
> And justify the ways of God to men."

These great teachers typify the catholicity and the scientific method that are so characteristic of the best expressions of our modern civilization. Whatever of insight we have gained into history, into philosophy, into art, and into nature, they have incorporated in their systematic thinking and have endeavored to illumine with the light of their controlling principles. Hegel, schooled in the teachings of Kant and Fichte, and coming early to an appreciation of the seed-thought of Plato and Aristotle, Bruno and Spinoza, has taught us in unmistakable language that independent, self-active being is the father of all things. Spencer, feeling the thrill of that unity which makes the cosmos one, and receiving from Lamarck and von Baer the hint that led him to see that the life of the individual furnishes the clew to the understanding of the life of the aggregate, whether natural or social, has formulated into a single and irrefutable law of progress the terms of that development, or evolution, which has been more or less dimly before the mind of man since thought began. The German with his principle of self-activity, and the Englishman with his law of evolution, offer us a foothold for our knowledge and our faith, and assure us that it will safely support them. From the one we learn the eternal reasonableness of all that is or can be, while the other teaches us the character of the process by which the visible universe, that every day presents new wonders to our gaze, has been builded out of the primeval star-dust. At their hands the two sublime and awe-inspiring verities of Kant—the starry heavens above and the moral law within—find their places in the life of the Spirit, and together testify to its eternity and its beauty.

Despite the fact that our age is one of unexampled scientific and industrial progress, yet nothing in all our modern scientific activity is more striking than the undisputed primacy of Thought—Thought not in antagonism to Sense, but interpretative of the data of Sense. Idealism, shorn of its crudities and its extravagances, and based on Reason rather than on Berkeley's analysis of sense-perception, is conquering the world. What Plato saw, Descartes, Leibniz, Kant, and Hegel have demonstrated. The once-dreaded Materialism has lost all its terrors. Science itself has analyzed matter into an aggregate of dynamical systems, and speaks of Energy in terms of Will. The seemingly inert stone that we grasp in our hand is in reality an aggregate of an infinite number of rapidly-moving centers of Energy. Our own Will is the only Energy of whose direct action we are immediately conscious, and we use our experience of it to explain other manifestations of Energy to ourselves. Modern mathematics, that most astounding of intellectual creations, has projected the mind's eye through infinite time and the mind's hand into boundless space. The very instants of the beginnings of the sun's eclipses are predicted for centuries and æons to come. Sirius, so distant that the light from its surface, traveling at a rate of speed that vies with the lightning, requires more than eight and one-half years to reach us, is weighed and its constituents are counted almost as accurately as are the bones of our bodies. Yet in 1842 Comte declared that it was forever impossible to hope to determine the chemical composition or the mineralogical structure of the stars. An unexpected aberration in the motions of Uranus foretold the existence of an undiscovered planet at a given spot in the sky, and the telescope of Galle, turned to that precise point, revealed to the astonished senses what was certain to Thought. A discrepancy in the weight of nitrogen extracted from the air we breathe, but yesterday led Lord Rayleigh, by an inexorable logic, to the discovery of a new atmospheric constituent, argon. The analytical geometry of Descartes and the calculus of Newton and Leibniz have expanded into the marvelous mathematical method—more daring in its speculations than anything that the history of philosophy records—of Lobachevsky and Riemann, Gauss and Sylvester. Indeed, mathematics, the indispensable tool of the sciences, defying the senses to follow its splendid flights, is demonstrating to-day, as it has never been demonstrated before, the supremacy of the Pure Reason. The great Cayley—who has been given the proud title of the Darwin of the English school of mathematicians—said a few years ago:[3]

"I would myself say that the purely imaginary objects are the only realities, the *ὄντως ὄντα*, in regard to which the corresponding physical objects are as the shadows in the cave; and it is only by means of them that we are able to deny the existence of a corresponding physical object; and if there is no conception of straightness, then it is meaningless to deny the conception of a perfectly straight line." The physicist, also, is coming to see that his principle of the conservation of energy in its various manifestations, is a new and startling proof of the fundamental philosophical principle of self-activity. Energy manifests itself as motion, heat, light, electricity, chemical action, sound. Each form of its manifestation is transmutable into others. The self-active cycle is complete.

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[3] *Presidential address, British Association for the Advancement of Science*, Southport, 1883.

But it is not from the domain of natural science alone that illustrations of the all-conquering power of Thought can be drawn. The genius of Champollion has called to life the thoughts and deeds of Amenotep and Rameses, and what appeared to Sense as rude decorative sketches on the walls of temple and of tomb are seen by the Understanding to be the recorded history of a great civilization in the valley of the Nile. The inscrutable Sphinx, that watchdog of the Pyramids, "unchangeable in the midst of change," which sat facing the coming dawn for centuries before the storied siege of Troy, now looks down on modern men who write the very words of its builders in the language of Shakspere and of Milton. The cries of savage man, the language-symbols of the early Aryans, and the multiform and complicated tongues of modern Europe, all so seemingly diverse to the ear and to the eye, have been the foundation for the sure laws of comparative philology that the labors and insight of Bopp and Grimm and Verner have built upon them. All these, and the many triumphs like them, are victories of insight; each marks a new stage in the conquering progress of the Reason, by which it finds itself in every part and phase of the cosmos and its life.

I regard this insight as to self-activity and the primacy of reflective Thought as the profoundest that philosophy has to offer; and, instead of being urged, as in centuries past, in antagonism to the teachings of science, it is now becoming the joint conclusion of philosophy and science together. It pulsates, too, in the world's grandest poetry and most exquisite art. It is the very soul of the verse of Homer and of Dante, of Shakspere and of Goethe. It makes the marble of Pheidias glow with life, and it guides the hand of Raphael and Michael Angelo as they trace their wondrous figures with the brush. It gives immortality to the most beautiful of temples, the Parthenon, that

> " . . . friend to man, to whom thou sayest,
> 'Beauty is truth, truth beauty,—that is all
> Ye know on earth, and all ye need to know.'"

It is also the inspiration of that superb mediæval architecture, that bears the name of the conquerors of Rome, which has given to Northern Europe its grandest monuments to the religious aspiration and devotion of the Middle Ages.

What, then, does this insight signify, and what is its bearing upon our educational ideals? Obviously the possession of an insight such as this, wrested from nature by the hand of science and from history by that of philosophy, must serve in many ways to guide us in estimating the importance of human institutions and educational instruments. We cannot accept either of these, without question, from the hands of a tradition to which our modern philosophy and our modern science were wholly unknown; nor can we blindly follow those believers in a crude psychology who would present us with so many mental faculties to be trained, each by its appropriate formal exercise, as if they were sticks of wood to be shaped and reduced to symmetry and order. Mental life, as Wundt so forcibly says, "does not consist in the connection of unalterable objects and varying conditions: in all its phases it is process; an active, not a passive, existence; development, not stagnation."[4] Herein is the mental life true to nature. Like nature, it is not fixed, but ever changing. This unceasing change, necessary to both growth and development, gives to life its reality and its pathos. It gives also to education its unending character, and the clew to its wisest processes.

The question that I am asking—what knowledge is of most worth?—is a very old one, and the answers to it that have been handed down through the centuries are many and various. It is a question that each age must put to itself, and answer from the standpoint of its deepest and widest knowledge. The wisest philosophers have always seen, more or less clearly, the far-reaching character of the question and the great importance of the answer. Socrates and Plato, Augustine and Aquinas, were under no illusions as to it; but often in later years the deeper questions relating to educational values have been either lost sight of entirely or very superficially dealt with. Bacon clothes in attractive axiomatic form some very crude judgments as to the relative worth of studies. Rousseau risks his reputation for sobriety of judgment in outlining an educational programme. Herbert Spencer turns aside for a moment from his life-work to apotheosize science in education, although science is, by his own definition, only partially-unified knowledge. Whewell exalts mathematics in language only less extravagant than that in which Sir William Hamilton decries it. In similar fashion, others, holding a brief for some particular phase or department of knowledge, have come forward crying Eureka! and proclaiming that the value of all studies must be measured in terms of their newly-discovered standard. The very latest cry is that studies and intellectual exercises are valuable in proportion as they stimulate enlarged brain-areas; thus making the appreciation of Shakspere, of Beethoven, and of Leonardo da Vinci solely a function of the circulation of the blood.

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[4] *Lectures on human and animal psychology* (New York, 1894), p. 454.

But to sciolists of this type philosophy and science can now make common answer. If it be true that Spirit and Reason rule the universe, then the highest and most enduring knowledge is of the things of the Spirit. That subtle sense of the beautiful and the sublime which accompanies spiritual insight, and is part of it, is the highest achievement of which humanity is capable. This sense is typified, in various forms, in the verse of Dante and the prose outpourings of Thomas à Kempis, in the Sistine Madonna of Raphael, and in Mozart's Requiem. To develop this sense in education is the task of art and literature, to interpret it is the work of philosophy, and to nourish it the function of religion. Because it most fully represents the higher nature of man, it is man's highest possession, and those studies that directly appeal to it and instruct it are beyond compare the most valuable. This has been eloquently and beautifully illustrated by Brother Azarias, that profound scholar who was taken from us all too soon. "Take a Raphael or a Murillo," he says.[5] "We gaze upon the painted canvas till its beauty has entered our soul. The spendor of the beauty lights up within us depths unrevealed, and far down in our inner consciousness we discover something that responds to the beauty on which we have been gazing. It is as though a former friend revealed himself to us. There is here a recognition. The more careful has been our sense-culture, the more delicately have our feelings been attuned to respond to a thing of beauty and find in it a joy forever, all the sooner and the more intensely do we experience this recognition. And therewith comes a vague yearning, a longing as for something. What does it all mean? The recognition is of the ideal." Toward the full recognition and appreciation of this insight into the great works of the Spirit, whether recorded in literature, in art, or in institutional life, higher education should bend all its energies. The study of philosophy itself, or the truly philosophic study of any department of knowledge—however remote its beginnings may seem to be—will accomplish this end. The ways of approach to this goal are as many as there are human interests, for they are all bound together in the bonds of a common origin and a common purpose. The attainment of it is true culture, as Mr. Matthew Arnold has defined it: "the acquainting ourselves with the best that has been known and said in the world, and thus with the history of the human spirit."[6]

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[5] *Phases of thought and criticism* (New York, 1892), pp. 57–58.

We now come in sight of the element of truth and permanence in that Humanism which Petrarch and Erasmus spread over Europe with such high hopes and excellent intentions; but which Sturm, the Strassburg schoolmaster, reduced to the dead, mechanical forms and the crude verbalism that bound the schools in fetters for centuries. Of Humanism itself we may say, as Mr. Pater says of the Renaissance of the fifteenth century, that "it was great rather by what it designed than by what it achieved. Much which it aspired to do, and did but imperfectly or mistakenly, was accomplished in what is called the *éclairissement* of the eighteenth century, or in our own generation; and what really belongs to the revival of the fifteenth century is but the leading instinct, the curiosity, the initiatory idea."[7] Many of the representative Humanists were broad-minded men whose sympathies were with learning of every kind. Erasmus himself writes with enthusiasm of other branches of knowledge than literature. "Learning," he says, "is springing up all around out of the soil; languages, physics, mathematics, each department thriving. Even theology is showing signs of improvement."[8] But unfortunately this broad sympathy with every field of knowledge was not yet widespread. The wonders and splendor of nature that had brought into existence the earliest religions and the earliest philosophies were now feared and despised as the basis of paganism; and on wholly false grounds a controversy was precipitated as to the relative worth of literature and of science that in one form or another has continued down to our own day. The bitterness with which the controversy has been carried on, and the extreme positions assumed by the partisans of the one side or the other, have concealed from view the truth that we are now able to perceive clearly—the truth that the indwelling Reason, by whom all things are made, is as truly present, though in a different order of manifestation, in the world of nature as in the world of spirit. One side of this truth was expressed by Schelling when he taught that nature is the embryonic life of spirit, and by Froebel when he wrote, "The spirit of God rests in nature, lives and reigns in nature, is expressed in nature, is communicated by nature, is developed and cultivated in nature."[9] The controversy as to the educational value of science, so far, at least, as it concerns educational standards and ideals, is, then, an illusory one. It is a mimic war, with words alone as weapons, that is fought either to expel nature from education or to subordinate all else in education to it. We should rather say, in the stately verse of Milton:

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[6] Preface to *Literature and dogma* (New York, 1889), p. xi.

> "Accuse not Nature: she hath done her part;
> Do thou but thine."

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[7] Pater, *The renaissance* (New York, 1888), p. 34.

[8] Froude, *Life and letters of Erasmus* (New York, 1894), p. 186.

[9] *Education of Man* (tr. by W. N. Hailmann, New York, 1888), p. 154.

And that part is surely to study nature joyfully, earnestly, reverently, as a mighty manifestation of the power and grandeur of the same Spirit that finds expression in human achievement. We must enlarge, then, our conception of the humanities, for humanity is broader and deeper than we have hitherto suspected. It touches the universe at many more points than one; and, properly interpreted, the study of nature may be classed among the humanities as truly as the study of language itself.

This conclusion, which would welcome science with open arms into the school and utilize its opportunities and advantages at every stage of education, does not mean that all studies are of equal educational value, or that they are mutually and indifferently interchangeable, as are the parts of some machines. It means rather that the study of nature is entitled to recognition on grounds similar to those put forward for the study of literature, of art, and of history. But among themselves these divisions of knowledge fall into an order of excellence as educational material that is determined by their respective relations to the development of the reflective Reason. The application of this test must inevitably lead us, while honoring science and insisting upon its study, to place above it the study of history, of literature, of art, and of institutional life. But these studies may not for a moment be carried on without the study of nature or in neglect of it. They are all humanities in the truest sense, and it is a false philosophy of education that would cut us off from any one of them or that would deny the common ground on which they rest. In every field of knowledge which we are studying is some law or phase of Energy, and the original as well as the highest Energy is Will. In the world of nature it is exhibited in one series of forms that produce the results known to us as chemical, physical, biological; in the history of mankind, it is manifested in the forms of feelings, thoughts, deeds, institutions. Because the elements of self-consciousness and reflection are present in the latter series and absent in the former, it is to these and the knowledge of them that we must accord the first place in any table of educational values.

But education, as Mr. Froude has reminded us,[10] has two aspects. "On one side it is the cultivation of man's reason, the development of his spiritual nature. It elevates him above the pressure of material interests. It makes him superior to the pleasures and pains of a world which is but his temporary home, in filling his mind with higher subjects than the occupations of life would themselves provide him with." It is this aspect of education that I have been considering, for it is from this aspect that we derive our inspiration and our ideals. "But," continues Mr. Froude, "a life of speculation to the multitude would be a life of idleness and uselessness. They have to maintain themselves in industrious independence in a world in which it has been said there are but three possible modes of existence—begging, stealing, and working; and education means also the equipping a man with means to earn his own living." It is this latter and very practical aspect of education that causes us to feel at times the full force of the question of educational values. Immediate utility makes demands upon the school which it is unable wholly to neglect. If the school is to be the training-ground for citizenship, its products must be usefully and soundly equipped as well as well disciplined and well informed. An educated proletariat—to use the forcible paradox of Bismarck—is a continual source of disturbance and danger to any nation. Acting upon this conviction the great modern democracies—and the time seems to have come when a democracy may be defined as a government, of any form, in which public opinion habitually rules—are everywhere having a care that provision be made for the practical, or immediately useful, in education. This is as it should be, but it exposes the school to a new series of dangers against which it must guard. Utility is a term that may be given either a very broad or a very narrow meaning. There are utilities higher and utilities lower, and under no circumstances will the true teacher ever permit the former to be sacrificed to the latter. This would be done if, in its zeal for fitting the child for self-support, the school were to neglect to lay the foundation for that higher intellectual and spiritual life which constitutes humanity's full stature. This foundation is made ready only if proper emphasis be laid, from the kindergarten to the college, on those studies whose subject-matter is the direct product of intelligence and will, and which can, therefore, make direct appeal to man's higher nature. The sciences and their applications are capable of use, even from the standpoint of this higher order of utilities, because of the reason they exhibit and reveal. Man's rational freedom is the goal, and the sciences are the lower steps on the ladder that reaches to it.

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[10] *Short studies on great subjects* (New York, 1872), II: 257.

Splendid confirmation of this view of science is found in the great Belfast address in which Professor Tyndall stormed the strongholds of prejudice one and twenty years ago. Said Professor Tyndall:[11]

"Science itself not unfrequently derives motive power from an ultra-scientific source. Some of its greatest discoveries have been made under the stimulus of a non-scientific ideal. This was the case amongst the ancients, and it has been so amongst ourselves. Mayer, Joule, and Colding, whose names are associated with the greatest of modern generalizations, were thus influenced. With his usual insight, Lange at one place remarks that 'it is not always the objectively correct and intelligible that helps man most, or leads most quickly to the fullest and truest knowledge. As the sliding body upon the brachystochrone reaches its end sooner than by the straighter road of the inclined plane, so through the swing of the ideal we often arrive at the naked truth more rapidly than by the more direct processes of the understanding.' Whewell speaks of enthusiasm of temper as a hindrance to science; but he means the enthusiasm of weak heads. There is a strong and resolute enthusiasm in which science finds an ally; and it is to the lowering of this fire, rather than to the diminution of intellectual insight, that the lessening productiveness of men of science in their mature years is to be ascribed. Mr. Buckle sought to detach intellectual achievement from moral force. He gravely erred; for without moral force to whip it into action, the achievements of the intellect would be poor indeed.

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[11] *Presidential address, British Association for the Advancement of Science*, Belfast, 1874.

"It has been said that science divorces itself from literature: but the statement, like so many others, arises from lack of knowledge. A glance at the less technical writings of its leaders—of its Helmholtz, its Huxley, and its Du Bois-Reymond—would show what breadth of literary culture they command. Where among modern writers can you find their superiors in clearness and vigor of literary style? Science desires not isolation, but freely combines with every effort toward the bettering of man's estate. Single-handed, and supported not by outward sympathy, but by inward force, it has built at least one great wing of the many-mansioned home which man in his totality demands. And if rough walls and protruding rafter-ends indicate that on one side the edifice is still incomplete, it is only by wise combination of the parts required with those already irrevocably built that we can hope for completeness. There is no necessary incongruity between what has been accomplished and what remains to be done. The moral glow of Socrates, which we all feel by ignition, has in it nothing incompatible with the physics of Anaxagoras which he so much scorned, but which he would hardly scorn to-day. . .

"The world embraces not only a Newton, but a Shakspere—not only a Boyle, but a Raphael—not only a Kant, but a Beethoven—not only a Darwin, but a Carlyle. Not in each of these, but in all, is human nature whole. They are not opposed, but supplementary—not mutually exclusive, but reconcilable. And if, unsatisfied with them all, the human mind, with the yearning of a pilgrim for his distant home, will still turn to the Mystery from which it has emerged, seeking so to fashion it as to give unity to thought and faith, so long as this is done, not only without intolerance or bigotry of any kind, but with the enlightened recognition that ultimate fixity of conception is here unattainable, and that each succeeding age must be held free to fashion the mystery in accordance with its own needs—then, casting aside all the restrictions of

Materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the knowing faculties, may be called the creative faculties of man."

The actions of the lower animals are conditioned by sensations and momentary impulses. Man, on the other hand, is enabled to raise himself above fleeting sensations to the realm of ideas, and in that realm he finds his real life. Similarly, man's will gradually frees itself from bondage to a chain of causes determined for it from without, and attains to a power of independent self-determination according to durable and continuing ends of action. This constitutes character, which, in Mr. Emerson's fine phrase, is the moral order seen through the medium of an individual nature. Freedom of the will is not, then, a metaphysical notion, nor is it obtained from nature or seen in nature. It is a development in the life of the human soul. Freedom and rationality are two names for the same thing, and their highest development is the end of human life. This development is not, as Locke thought, a process arising without the mind and acting upon it, a passive and pliable recipient. Much less is it one that could be induced in the statue of Condillac and Bonnet. It is the very life of the soul itself.

There is a striking passage in *The Marble Faun* in which Hawthorne suggests the idea that the task of the sculptor is not, by carving, to impress a figure upon the marble, but rather, by the touch of genius, to set free the glorious form that the cold grasp of the stone imprisons. With similar insight, Browning puts these words into the mouth of his Paracelsus:

> "Truth is within ourselves; it takes no rise
> From outward things, whate'er you may believe.
> There is an inmost center in us all,
> Where truth abides in fullness; and around,
> Wall upon wall, the gross flesh hems it in,
> This perfect, clear perception. . .
> . . . And, to know,
> Rather consists in opening out a way
> Whence the imprisoned splendor may escape,
> Than in effecting entry for a light
> Supposed to be without."

This is the poetical form of the truth that I believe is pointed to by both philosophy and science. It offers us a sure standing-ground for our educational theory. It reveals to us, not as an hypothesis but as a fact, education as spiritual growth toward intellectual and moral perfection, and saves us from the peril of viewing it as an artificial process according to mechanical formulas. Finally, it assures us that while no knowledge is worthless,—for it all leads us back to the common cause and ground of all,—yet that knowledge is of most worth which stands in closest relation to the highest forms of the activity of that Spirit which is created in the image of Him who holds Nature and Man alike in the hollow of his hand.

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II

THE EFFECT OF THE THEORY OF EVOLUTION ON EDUCATION[1]

Like all great truths, the idea of evolution has been held in a vague way even from the earliest dawn of thought. But only very recently do we observe any attempt to apply it to life. We find the explanation of this in the profound difference between the old philosophy and modern science in their respective attitudes toward truth. To the old thinkers, pure thought and gross matter, the ideal and the real, belonged to two different worlds. They never dreamed of bringing down their noble thoughts to the practical concerns of life—to apply them to social organization or politics or religion. These glorious ideas were for the delectation of thinkers only. These daughters of the intellect were too pure and holy to be married to the grossly practical. They were vestal virgins about the sacred altar of truth ; beautiful exceedingly, but forever barren. To modern science, on the contrary, every truth has, and must have, its practical application. The tree of knowledge must bear appropriate fruit for the material benefit of humanity. Evolution is now, therefore, applied to practical life, because it has passed from the domain of vague philosophic speculation into that of definite scientific knowledge. This change has not taken place all at once, but only by the successive labors of many men, each contributing his own characteristic part. It was the part of Lamarck to awaken scientific attention and deeply stir the scientific mind. It was the part of Darwin to convince the scientific mind of the truth of the evolution of the organic kingdom. It was the part of Spencer to extend the law of evolution to embrace every department of nature, and thus to make it applicable to society, to religion, and to education. It was the part of Huxley to fight the battles of evolution and to conquer its acceptance by the intelligent, but unscientific public. It was, and is, the part of American evolutionists to complete the evidence from palæontology where it was weakest, and also—for we are less hampered by tradition here than elsewhere—to apply it fearlessly, yet I hope reverently, to religious and social thought.

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[1] Address delivered before the National Educational Association at Denver, Colo., July 11, 1895.

The final effect has been to revolutionize our whole view of nature and of man; to change the whole attitude of the mind toward truth and thus to modify deeply our philosophy in every department; and, therefore, also to modify profoundly our theory and methods of education. It is this effect on education that I wish to bring before you this evening. But the subject is so large, and my time so short, that I can only touch lightly some most salient points.

I would be glad to point out to you how the theory of evolution indirectly, but in a most important way, affects education (as it does all departments of thought) by simply elevating the intellectual standpoint and widening the intellectual horizon; but I must forego this and proceed at once to its direct effect on our theories and methods of education. And here, as you already anticipate, I must speak first of all of its immediate effect on biology; and then afterward on its indirect effects, through biology, on nearly all the higher departments of thought. These I shall call higher lessons taught in the school of evolution.

Organic evolution is evolution *par excellence*. In the mind of Darwin evolution was, and in the minds of very many it still is, identified with the theory of origin of species by descent with modifications. To many it means only a continuous genetic chain of all organisms from the earliest to the present, and, therefore, a blood-kinship among all existing organisms from lowest to highest. It is to Spencer that we owe the extension of this law of continuity to every realm of nature, and thus this mode of thinking to every realm of thought. Organic evolution, therefore, whether of the individual or of the organic kingdom, is the type of evolution. In that department the battle of evolution was fought and won. Right here, in the origin of new organic forms, was found the barrier to the acceptance of the law of continuity—the stronghold of supernaturalism in the realm of nature. When this barrier gave way, the whole domain of thought was immediately conquered. It is right, then, that I should take up this department first.

There is a striking contrast between the old natural history and the new biology. The one is perhaps best represented by Audubon, the other by Huxley. In the one imagination predominates, in the other reason; in the one, love of field and forest and mountain, in the other thoughtful work in the laboratory. The one studies form and habits, the other structure and function. The characteristic implements of the one are the shotgun, the insect-net, and the dredge, of the other the scalpel and the microscope. In the ideal biologist, these two must be united in equal proportions. Such union was nearly realized in Agassiz and Darwin, because they stood just at the parting of the ways. Zoölogists now belong mainly to the one class or the other, but predominantly to the second class. In botany, the differentiation has not been so extreme. The change is, therefore, best illustrated in zoölogy.

Such, then, is the contrast between the old and new style naturalist. The change may, perhaps, be regretted by some, but was absolutely necessary in the development of biological science. The old-style naturalist had been working from time immemorial, enthusiastic in traveling, observing, collecting, describing, classifying; in a word, gathering the materials of science; but thoughtful men began to ask, "Where is the science itself?" "What light does all this throw on the real problem of life?" "What is the meaning of the classification so laboriously constructed?" "What is the meaning of the facts of geographical distribution of species gathered by such extensive traveling?" The old natural history as a real science seemed to have reached its limit, if it was not indeed moribund. Collections of dry plants were contemptuously compared to gathered hay. Geographical distribution of organisms was a tiresome chaos of curious facts without connecting idea. Just then came evolution—a great new idea, informing and giving life and meaning to this dead mass of facts, bringing order out of this chaos, "creating a soul under the dry ribs of this death." The true meaning of classification is at once revealed, viz., the various degrees of blood-kinship in descent. Geographical distribution of organisms is at once completely explained by migrations produced by the glacial epoch and the slow evolution-changes produced by a changed environment, physical and organic. The strange and hitherto inexplicable course of embryonic or ontogenic development becomes now but a brief recapitulation of the phylogenic or family history. It is easy to imagine the prodigious impulse given to the sciences of life. The deepest problems of plant life, animal life—yea, of human life and social life—seemed now within reach of science. The army of investigators was increased tenfold. Biological laboratories sprang up everywhere, on lake- and sea-shores, and still more numerously, in schools, colleges, and universities.

Such was the intellectual impulse given by the introduction of a great new idea. But great new ideas always involve new methods of work and, therefore, new methods of teaching. The new method has been called by different names. I will call it the "evolution method." But as this is only one of many methods of science, I must introduce its discussion by a few words on scientific methods generally.

We all know the prodigious enlargement of the domain of modern thought produced by the birth and rapid growth of the sciences of nature. But until recently there has been but little corresponding change in the subject-matter of education, especially in the lower schools. This was right. The reason is obvious. All attempts to teach science by the old textbook methods gave very unsatisfactory results. Science-teaching, as a means of mental culture, seemed far inferior to mathematics and the languages. These latter, at least to some degree, threw the pupil on his own resources; but science-teaching by pure classroom, text-book methods, is the barest *memoriter* exercise. Now, science is nothing if not a knowledge of nature at first-hand, and science-teaching is nothing unless, in some degree, it brings the pupil in contact with nature. The new knowledge must have new methods. In a word, science must be largely taught in the field and in the laboratory. This field and laboratory method must supplement every other method in science-teaching. This is now so generally understood that it is unnecessary to dwell on it.

But there is another and deeper sense in which we may use the term method, which is even more important. It is method not in the sense of use of eye and hand, but of use of brain; not in sense of dexterous manipulation, but of orderly thinking. In this sense, scientific methods bear the same relation to intellectual progress that tools, instruments, and machines bear to material progress. They are intellectual contrivances whereby we accomplish results which would otherwise transcend our power. As the civilized man has no superiority over the savage in bare-handed strength, and the great material results accomplished by the former are wholly due to the use of material contrivances called tools, instruments, machines—so the scientific man claims no superiority over others in unassisted intellectual power, and the great results accomplished by him in the acquisition of knowledge and in the conquest of nature are wholly due to the use of intellectual contrivances, called scientific methods. These are mainly three: 1. The method of symbols, or mathematical method. We all know the power of this method. We all know how by the use of a few numeral digits, a few letters, *a* and *b*, *x* and *y*, and a few signs, + and − and =, the veriest schoolboy may quickly solve questions which would defy the unaided power of an intellectual giant. 2. The method of experiment, especially applicable to physics and chemistry. Physical phenomena are usually too complex, too affected by disturbing causes and complicating conditions, to be understood at once as they occur in nature. The physicist, therefore, removes, one by one, these disturbing causes and complicating conditions, watching the result, until the true cause and the necessary conditions are discovered. I need not tell you what this method has accomplished. 3. The method of comparison. The phenomena of life in its higher forms are so complex that we cannot understand them without simplification, and yet so delicately adjusted that in most cases we cannot, we dare not, use the method of experiment. If we introduce our rude hands to modify the phenomena, we are in danger of destroying life itself—the very thing we are investigating. But nature herself has prepared for us three series of experiments. 1. As we go down the scale of life from man through vertebrates and invertebrates to the lowest protozoa, the complex structure and functions of the animal body become simpler and simpler, by the removal of one complication after another, until finally the complex problem of life is reduced to its simplest terms. This is the taxonomic series. 2. Again, as we go backward in the history of the development of any one of the higher animals, say man, from the mature condition through the stages of youth, new-born, embryo, to the earliest germ cell, we find that structure and function again become simpler and simpler until again the problem of life is reduced to the simplest terms. This is the embryonic or ontogenic series. 3. Again and lastly, if, commencing with the fauna of the present geological epoch, we go backward in geological time, taking successively those of earlier and earlier periods, even to the dawn of life, we find a similar series of simplifying structures and functions until we again reach the simplest possible expression of the problem of life. This is called the geological or phylogenic series. This last is *par excellence* the evolution series. But they are all evolution series, since they are similar and all have their origin in evolution.

It is by comparison of the terms in each one of these series, and of the three series with one another, that all true scientific knowledge in biology has been attained. It is therefore called the "comparative method." It was to some extent used and so framed before the birth of evolution as a scientific theory; but evolution has given it a new meaning and a new power and greatly extended its application, and, therefore, it should now be called the "evolution method." It is the great method of discovery in all departments which are too complex to be investigated by other scientific methods. When phenomena are too complex to be readily understood, and at the same time too delicately adjusted to submit to the method of experiment, all we can do is to watch all the stages of increasing complication—the process of gradual becoming. If by the method of experiment we put nature on the rack and extort from her the truth, by the evolution method we obtain the truth, less boldly but not less efficiently, by watching and surprising nature in her most secret modes of working.

This method, although first used in biology, may be and has been extended to all the more complex phenomena of human life—to psychology, to sociology, to politics and government, and even ethics and religion. Scientific methods generally, but this one especially, may be likened to the "little leaven which a woman took and hid in three measures of meal"—a little, very little scientific method introduced into three measures of the old curriculum has "leavened the whole lump." But we all know how much depends on the leaven. Alas, how much bad leaven has been used, especially in sociology! It is necessary, therefore, to say something of how to make good leaven. This brings me to the subject of what I call schools of methods.

It may be regarded as a law that although each one of these methods may be used in several departments, yet it is best developed and is used with most success in the simplest and lowest department, where it was first introduced; and thus this department becomes the school for its skillful use. Thus, for example, while the method of symbols is used in other departments,—as in physics, chemistry, and even sometimes in logic,—yet the proper school for its skillful use is mathematics, where it was first introduced, and is still most powerful. Again, although experiments may be used in many departments,—as in chemistry, physiology, psychology, and even perhaps in sociology,—yet undoubtedly the proper school for the skillful use of this method is physics. So also the method of comparison or the evolution method may indeed be used in all the more complex departments of knowledge, but the only proper school in which to become imbued with its characteristic spirit and practiced in its skillful use, is biology. Other and still higher departments can never take on a true scientific form until they use the method which has proved so successful in biology; and this they must learn to do in the biological school. As anatomy, physiology, and morphology became scientific only by becoming comparative anatomy, physiology, and morphology, so also psychology will never become scientific until it becomes comparative psychology, nor sociology until it becomes comparative sociology.

I have said that the leaven of scientific method has leavened the whole lump of the school curriculum. I now go farther and say that the leaven of evolution and the evolution method has leavened the whole lump of human knowledge, especially in all those departments which are too complex to be subdued by other methods. This method is applicable not only to plant life and animal life, but also to all the phenomena of human life, individual and social, and therefore to psychology, to language, to history, to sociology, and to ethics. In fact, the enormous recent advances in all these are due wholly to the use of the so-called historic method. But what is this but another name for the evolution method? It would carry me too far and take me too long to justify this assertion in all these departments. Let me draw your attention only to a few of the most important lessons taught us in these higher departments.

A lesson in psychology—Until very recently, the psychical phenomena of man were studied as a separate department of knowledge, having no possible connection with any other and capable of investigation only by the method of introspection; and an elaborate system of philosophy has thus grown up wholly separated from other knowledges. But it is now no longer possible to admit such disconnection. There can no longer be any doubt that man, both body and spirit, came by a process of evolution from some lower form of animal; that humanity emerged gradually by a natural process out of animality. Not only every organ and function of the human body, but every faculty of the human mind, has its beginnings and foreshadowings, its embryonic condition in the higher animals. It is quite evident that psychology can never become a progressive science until every stage of the development of the psychical nature of man is traced; until the psychical phenomena of man are studied in comparison with those beginnings of the same which we find in the higher animals, and in infants; until we trace all stages of the process by which they became what we find them in the mature man. Moreover, even the experimental method is now applied to psychology with encouraging success. We have thus in psychology at least three methods of research, viz., the method of experiment, the method of comparison or evolution method, and the method of introspection. The relative domains of these have not yet been adjusted. The experimental method, from which so much is now hoped, although undoubtedly of great value, is, I believe, limited in its application to the lower phenomena, *i. e.*, those most allied to physiology. Introspection, on the other hand, is limited to the higher phenomena, *i. e.*, the distinctively human. The method of comparison, or evolution method, is probably without limit in its application. It is to this method, therefore, that I look with most hope.

A lesson in sociology—The old idea of the origin of things was that of creation at once by fiat, without natural process, and permanence thereafter until another creation. Hence arose the doctrine of instantaneousness of specific origin and the permanency of specific types. According to this view, if the organic kingdom advances at all, it must be by successive exterminations of old forms and re-creations of new and better forms. According to this view applied to the domain of philosophy and science, all truth must be absolute, unchangeable, and permanent; and therefore, if knowledge advances at all, it must be by a succession of theories exploded and other and better ones substituted. In theology, views of God, of man, and of nature and their mutual relations must be either perfectly true or utterly false and baneful. Forms of religion and creeds are either perfect, God-given truth or else inventions of the devil to deceive mankind. Toleration, therefore, is inconsistent with loyalty to truth. In politics, the unreasoning antagonisms of parties come necessarily from this attitude of the mind. In social philosophy, improvement in society can only come by utter destruction and complete reconstruction out of entirely new materials. Thus, in all things, by this old view, advance can take place only by a succession of catastrophes and remakings out of the whole cloth.

Evolution changes the whole attitude of the mind in this regard. The very first lesson taught by evolution is that nothing originates all at once, like a creation by fiat; but all things are in a state of continuous change and growth. Progress is not by a succession of destructions and re-creations, but by a gradual process of evolution. As in the evolution of the organic kingdom, some forms, *i. e.*, the more rigid, perish and leave no progeny, while some, *i. e.*, the more plastic, are modified into new forms, better suited to the ever-changing environment; and all the new forms come thus only by modification of the old; so in the advance of science, some ideas and theories die out and leave no progeny, while others are modified to newer and truer forms, and all the new and true forms come thus only by modification of the old. And so also the progress of society, of religion, of all things, is not by sweeping destructions and recreations out of new materials or reorganizations on an entirely new basis; but must be only by modification of old forms into the higher new. In a word, the social organism is not made but grows.

A second lesson in sociology—There are two views of the relation of the individual to society which may perhaps be called the ancient and the modern. According to the one, the individual is wholly subordinate to society, and has no rights in the presence of social interests. The individual has no value except as an organ of the body politic. This view is abhorrent to the modern mind, which has indeed gone to the other extreme of apotheosis of the individual. This great change was undoubtedly due to the introduction of Christianity, which exalted to infinity the worth of the individual immortal human soul, while it correspondingly belittled the value of society as earthly and temporary. This was especially true of the early Christians, for whom the end of the world was near at hand. This idea of the supreme importance of the individual, and that society exists only for us, the individuals of to-day, has reached its culmination in the present time, and nearly all the evils which now threaten society may be traced to this source. The higher law of the ancients was the interest of society; the higher law of the moderns is the dictate of the individual conscience. The evils of this extreme view are becoming so obvious that there is a strong tendency to swing back again to the other extreme of socialism. Now, there is a profound truth in both these views, and they must be combined and reconciled in a true social philosophy. This, I believe, evolution will help us to do. Let us see.

Organic evolution reached its term and completion in achieving man. But evolution did not stop there; for in achieving man, it achieved also the possibility of another and higher kind of evolution, and was therefore transferred to a higher plane, and continued as social evolution or human progress. Now, as the highest end, the true significance, the *raison d'être* of organic evolution was the achievement of man; so the highest and real meaning of society and social progress is the achievement of the ideal man. This view entirely changes the relation of the individual to society by giving a new and nobler meaning to society. Individual interests must be subordinated to social interests, not only because society is the greater organism, nor even because it represents all other individual interests, but also, and chiefly, because society is the only means of achieving the ideal. The higher law from this point of view is loyalty, not to society as the ancients would have it, nor yet to the conscience as we moderns would have it, but to the divine ideal humanity. Fortunately for us, however, the highest interests of the individual are also thereby subserved.

This point is so important that I must stop a moment to explain and enforce it.

The social organism has often been compared to the animal organism, the body politic to the animal body, and social progress to organic evolution. Doubtless this comparison and the inferred likeness may be and have been carried much too far. Doubtless there are many fundamental differences arising from the presence of new and higher forces in the social body, and of new and higher factors in social progress; and no one has insisted on this more than I. But it is a mistake also to minimize the resemblance. It has been common for the opposers of such resemblance to say that in the ideal of the animal organism, the life and individuality of the constituent parts are completely merged in the life and individuality of the whole; that the part is of no value except as an organ of the whole; and that while this ideal may have been to some extent realized in some ancient societies, it is utterly abhorrent to the modern mind; the infinite value of the eternally, enduring human soul forbidding any such merging of the individual life into the common social life. But let us not exaggerate the contrast. It is not true that in the animal body the life of the part is wholly lost in the life of the whole. On the contrary, such life as each part is capable of is completely realized; each part has the very best that it is capable of. Again, it is not true that the part works for the whole without corresponding benefit in return. On the contrary, the acknowledged ideal of the social organism, viz.: that each part works for the whole, and the whole for each part is completely realized in the animal organism. Where then, is the difference? For it must be very fundamental. It is this: In the one case the integrating bond is material and necessary, and the function of each part unchangeably fixed forever; in the other, the integrating bond is spiritual, and therefore free, and the function of each part is freely chosen, and may be freely changed for the better. In the one case, the union is by necessary law of mutual dependence, in the other by a free law of mutual love and mutual help.

Now, if society consisted only of ideally perfect, happy, unimprovable beings associated only for mutual enjoyment, then, indeed, I suppose, the infinite worth of the immortal human soul, in comparison with any temporary association, would make such association wholly subordinate to the individuals. But when we remember that human society is an association of individuals not long since emerged out of animality, nor far on the way toward a true, *i. e.*, an ideal humanity, and that the achievement of that ideal is the real end and meaning of our earthly life; and, finally, that an organized society is the necessary and only means whereby the ideal may be achieved, whether in the individual or in the race, we see at once that the immediate individual interest must be subordinate to this, the highest interest of humanity. But subordination is not sacrifice. On the contrary, it is the highest success for the individual. In subserving this, the highest interest of humanity, each individual is thereby subserving his own highest interests. In striving to advance the race toward the ideal he is himself realizing that ideal in his own person.

Why, then, are we so slow to learn this lesson? Why are we so loath to surrender our extreme individualism? I answer, not only because it is in accord with our natural selfishness, but also, and I believe chiefly, from the effects of an inherited narrow philosophy of life. Is it not evident that so long as the Golden Age was behind instead of before us; so long as man was regarded as in a state of sad fall from a pristine ideal condition; so long as it was believed that the perfect image of God, once possessed, had been lost and must be restored, not through society, but by some inscrutable miraculous agency; so long as this was the mental attitude, the supreme importance of society as a means of salvation, *i. e.*, of attaining the ideal, must have remained unrecognized? The outcome of such a mental attitude was of necessity the individualism run-mad of the present day. But if on the contrary, as evolution teaches, our race has gradually emerged out of animality into humanity; if the Divine image was at first dim, scarcely recognizable, and the mission of humanity is, not to restore, but to brighten that image until it is perfect—if the ideal, the Golden Age, is not in the past but in the future—then our whole mental attitude toward society becomes changed—then the good of the individual must be, not sacrificed indeed, for that is not necessary, but freely subordinated to the good of society; then the prevailing law is not the law of mutual antagonism and struggle, and survival of only the strongest and fittest; but the law of mutual love and mutual help; and the making of as many as possible strong and fit to survive.

Still another lesson and the last—But whether to call it a lesson in psychology, or in sociology, or in ethics, I do not know, nor does it matter much; for all departments meet on the highest plane. But I suppose it may be most properly called a lesson in ethics, for it offers us a moral ideal.

I have said in a previous lesson that individual interests must be subordinated to the attainment of the ideal. Now. what is this ideal? I believe that evolution will help us to find it. If man has indeed emerged out of animality into humanity, as evolution teaches, then must he approach his ideal just in proportion as he rises above the distinctively animal and lives habitually on the distinctively human plane; and he completely attains it when the distinctive humanity is carried out to its highest limit. Now, it is evident that this proposition involves not only a moral ideal but a means of attaining it; *i. e.*, a philosophy of the right conduct of life. Let us stop then to differentiate it clearly, but very briefly, from other and older philosophies of life. I feel constrained to do this lest you should think that it involves an ascetic philosophy.

There are two opposite philosophies of life which have hitherto dominated the world of thought, aye, and of conduct too. According to the one, our nature is essentially dual, *i. e.*, animal and spiritual, without cordial relation between. The pure spiritual nature is imprisoned here on earth for a brief space in an impure material body and dominated by it, and the higher spiritual nature becomes purer, nobler, freer, just in proportion as it despises, tramples underfoot, and extirpates the animal nature. This is the ascetic philosophy of life.

According to the other, our nature is one. Man is simply a higher kind of animal. His pleasure may, indeed, be higher, more refined than that of other animals, but still they are all on the same plane—the animal. Pleasure, enjoyment—the more refined the better, of course—is the only end of human as of animal life. Virtue is only a more refined kind of selfishness. This is the hedonistic philosophy of life. Now, evolution completely combines and reconciles these two mutually excluding opposites, both as to the nature of man and as to the philosophy of life, and is, therefore, more rational than either. According to the evolution view, humanity emerged out of animality, the spirit of man out of the *anima* of animals; but at the moment of emergence it was born into a new and higher spiritual world of self-consciousness and immortality. If this be so, then evidently the mission of man and the true philosophy of the right conduct of life are not an extirpation but a subordination of the animal to the higher spiritual nature. And this is attained not by the natural decay nor by the voluntary extirpation of the animal, but by the natural growth and the voluntary strengthening of the higher spiritual nature. The animal was in evolution the mother and is still the nourisher of the spiritual; and, therefore, the stronger the animal nature the better, if so be it is held in due subjection. There is not an appetite, passion, or emotion of our animal nature but is contributive to our spiritual nature, if only it be duly subordinated. In our complex human nature the higher is nourished and strengthened by its connection with the more robust lower, and the lower purified and refined by its connection with the higher, and the whole man is thus elevated to a higher plane without violating the integrity of his manhood.

So much was necessary to say lest I be misunderstood as sustaining an ascetic philosophy. I repeat, then, if man has emerged out of animality into humanity, then he approaches his ideal just in proportion as he departs from the characteristically animal plane and lives on the distinctively human. In animals the whole life and activity are concentrated on the now. Man, on the contrary, by memory and imagination, and more and more as his distinctive human nature predominates, lives also in the past and the future. His life expands more and more backward and forward, until in the ideal man he lives equally in all time. For him there is equal reality in all moments, past, present, and future. He weighs in equal balance all events without any prejudice in favor of the now, and is thus, as it were, unconditioned by time. This is the ideal of wise and prudent conduct, the intellectual ideal. Again, in animals the whole life and activity are concentrated on the self, although an unrecognized self, for selfhood is first recognized in man. Man, on the contrary, and more and more as his distinctive human nature predominates, lives also in and for other selves. His life expands and incorporates more and more the lives of others, through a realizing sympathy and love. He reaches his ideal in this direction when his life spreads equally over all other lives in proportion to their real work; when self-love no longer in the least disturbs the justness of judgment or unduly influences conduct; when self and other selves are weighed in the same just balance—in a word, when he is at last unconditioned by self. This is the ideal of right conduct—the moral ideal. The moral law of equal love to self and neighbor is now fulfilled. This ideal, first given by the moral insight of the Founder of Christianity, is now at last verified by science. Observe that the condition and beginning of this whole process of evolution are the recognition of selfhood in man. But observe also that man finds selfhood only to lose it again in love.

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III

EDUCATION ACCORDING TO NATURE[1]

He would do the world no mean service who should write an impartial history of fads, showing the rise, progress, termination, and results of each. Such a history would doubtless discover to us the fact that even the thinking world is addicted to hobby-riding, and that successive fads are the rungs of a ladder on which thought ascends from lower conceptions to higher, and thus gains wider and wider horizons for truth. What were Nominalism and Realism but philosophical fads, engrossing men's thoughts for a season, kindling the controversial spirit up to the fighting-point, then waning in interest, and finally giving place to other fads? Phlogiston, Malthusianism, Darwinianism, the nebular hypothesis, phrenology, and probably free coinage, Christian science and hypnotism are phenomena of the same sort. These are all "guesses at truth." Their devotees, indeed, regard them as truth itself, but successive thinkers finally separate the grains of pure metal from the larger volume of alloy, garner the precious residue into the general storehouse of science, and then make a venture at new guesses. The line of Sherman's march to the sea is now marked by abandoned forts, exploded shells, and half-filled trenches. So the triumphal march of thought is marked by abandoned hypotheses, exploded theories, and empty conjectures.

The same phenomenon is observable in the special science to which we are addicted. Men of my years have lived through a succession of educational fads, and our predecessors, near and remote, were doomed to traverse a similar route. Within our own time object-teaching rose in the East, if not as a sun, at least as a star of the first magnitude, but its distinctive light has been lost in its passage across the horizon. Then appeared other lights, from time to time, great and small, to which we did homage, such as manual training and the inductive method; and now the suns or meteors that are beginning to blaze on our pedagogic firmament are concentration and "a pot of green feathers."

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[1] An Address delivered before the National Educational Association, at Denver, Colo., July 10, 1895.

We are not to forget that the monitorial system swept over the country eighty years ago like an epidemic, and that it took such a stalwart as De Witt Clinton clean off his feet. The head that could project the Erie Canal could also utter such a wild prophecy as this: "I recognize in Lancaster the benefactor of the human race. I consider his system as creating a new era in education—as a blessing sent down from heaven to redeem the poor and distressed of this world from the power and dominion of ignorance."[2] Returning to the figure just employed, Lancastrianism was a blazing comet, creating a profound sensation at the time of its appearance, but it speedily burned out, leaving hardly as much as a poor cinder by way of remembrance.

In place of fad I might have used the word craze, or hobby, but fad is the newer term, and I use it to denote a wide class of phenomena, social, political, philosophical, educational, and even religious. I use the term in a more serious sense than the ordinary, to indicate a phase of thought that, while serious, is at the same time partial and shallow, and, in its appearance and disappearance, epidemic.

It will be readily guessed that I include "Education according to Nature," or "Follow Nature," among educational fads. In the sense just stated, I do; only "Nature" must be considered as the most respectable of these fads, by reason of its antiquity and longevity; though sometimes, as in the case of Joseph Payne and other imitators of Mr. Spencer, the whole treatment is little better than cant—shallow and offensive.

The precept, "Follow Nature," is prevalent in ethics, in education, and in medicine, where Nature is set up as a criterion of right and wrong, of true and false. A practice that is supposed to be in conformity with Nature is thereby proved to be right, or true; while a practice that can be shown to be contrary to Nature is assumed to be wrong, or false. Thus, Aristotle defends slavery because it is *natural*, some men being born to rule, others to serve, some being strong, others weak; while he condemns usury, or the taking of interest, because it is *unnatural*. Flocks, and crops springing from the soil are wealth proper, and for convenience they may be converted into money; but to produce money from money, a dead thing from a dead thing, is unnatural, and therefore wrong.[3] Our modern temperance reformers use the same argument. Alcohol is an evil, because it is produced by the decay or rotting of a natural product, as corn, rye, or wheat; though just why vinegar should escape condemnation is not at all clear.

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[2] S. S. Randall, *History of the common schools of New York*, p. 28.

Peter the Great suffered a similar delusion when he ordered his naval cadets to use sea water for drinking purposes. Is not the sea the natural domain of the sailor, just as the land is the natural domain of the soldier? The sailor must therefore adapt himself to his environment; he must draw his sustenance from the element on which he lives. Had Peter taken wise counsel before giving this order, he might have been reminded that it was a scientific error to include sailors and salt-water fish in the same category; but he was following Nature, as he supposed, and his cadets had to perish.

The same false analogy betrayed John Locke into his "hardening process." Men in a "state of nature" wear no shoes, and though their clothing is very scant, even in winter, they adapt themselves to rigors of temperature without harm; my young gentleman should therefore follow Nature rather than art, in the matter of clothing, and so should wear no shoes; but as he is compelled to live in society, we will strike a compromise, and he may wear shoes, provided they are plentifully supplied with holes.

The phrase "Education according to Nature" at once suggests the name of Rousseau, for it was he who, in his *Émile*, fairly set the fashion for subsequent writers on education, great and small. Mr. Spencer adopts the new fashion, and his pages are overshadowed with capital N's. He accepts the new mythology, writes out a new creed, and virtually founds a new school of theorists. No theologian was ever more dogmatic. He postulates Nature as an infallible guide, and then deduces educational processes with almost mathematical precision. Whatever will not fit into his system, as history, he conveniently rejects.

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[3] "Down to the Norman conquest the Britons had 'living money' and 'dead money,' the former being slaves and cattle, the latter metal."

Rousseau was essentially a pessimist, placing the Golden Age in the distant past rather than in a distant future. Civilization, so called, was full of perversions and defilements; the arts and sciences were instruments of corruption; and the only salvation for the race was a return to primitive simplicity and purity. As the main principle of political philosophy was the assumption that society was retrograding because it was receding from Nature, he readily adopted the conception that the salvation of society lay in a new system of education, whose purpose should be to bring men back to Nature, and thus to purity and to peace. The myth Nature dominated Rousseau's thought, or rather his feeling, for he felt rather than reasoned. Everything must be *natural*, even his children. Like Mr. Spencer, though in another manner, Rousseau was a rhetorician, enamored of the sound of his own voice; and such rhetoric is always fatal to logic. He carries conviction, as the advocate or the orator does, by enlisting the feelings on his side of the controversy. Hence his *Émile* is a romance, and the characters that appear in it are as unreal as any that one may find in modern fiction. And yet it is not a contradiction to say of it what Rousseau himself said of the *Republic:* "c'est le plus beau traité d'éducation qu 'on a jamais fait."

Though Rousseau nowhere defines Nature, it is not difficult to understand the general sense in which he uses this term. His whole creed is virtually contained in the opening paragraph of the *Émile:* "Everything is good as it comes from the hands of the Author of Nature; but everything degenerates in the hands of man. He forces one country to nourish the productions of another; one tree to bear the fruits of another. He mingles and confounds the climates, the elements, the seasons; he mutilates his dog, his horse, and his slave; he overturns everything; he loves deformity, monsters; he will have nothing as Nature made it, not even man; like a saddle-horse, man must be trained for man's service, he must be made over according to his fancy, like a tree in his garden."[4]

In other terms, restore the world to the condition it was in before it began to be modified by man's agency, and we have it in its ideal state, "the state of nature." Relieve a modern garden from human interference, and it will soon revert to a state of nature. Natural fruit is better than fruit that has been cultivated. The ideal horse is the wild horse. The ideal man is the red Indian. Education is not an ascent from wildness, but a return toward wildness. Rousseau admits men to his state of nature provided they make no attempt to refashion one another or to modify their environment. The moment they begin to do this, perversion sets in, and art usurps the place of Nature. This perversion of Nature by art has gone to the greatest length in cities. Hence, relatively, we return to Nature when we go from the city into the country, as from Paris to the woods of Montmorency.

How much of this is rhetoric, and how much sober conviction, it is doubtless impossible to tell with any exactness. In construing Rousseau's theory we must make some allowance for temperament, and also for the extravagances into which reformers invariably fall. Overstatement is an element in a reformer's outfit, whether it takes the form of a satire, as in Rabelais and Dickens, or of fiction and fancy, as in Rousseau. All an interpreter can do is to trace the main lines of the argument and show the limitations of the theory by typical examples. This I will attempt to do in the sequel.

The practical application of Rousseau's theory is well exhibited in his doctrine of discipline by natural consequences. Through willfulness, *Émile* breaks the windows of his chamber. His father replaces them, but the boy again breaks them. The transgressor is thereupon turned over to the relentless laws of Nature. The windows are not replaced, but the boy is confined to his room, where the cold wind blows on him by day and by night, thus exposing him not only to discomfort, but to danger; he might take a severe cold and die of pneumonia. The great danger of this exposure occurs to Rousseau, but he promptly replies that it is better to die of a cold than to be a fool! In the case of *Émile*, however, matters do not come to this sad pass, but he is finally conquered by suffering the disagreeable consequences of his own folly and reforms in a manner befitting the author's theory.

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[4] *Émile*, bk. i. p. 1.

The application of this doctrine is extended still further. To cure *Émile* of his vanity and forwardness, he is allowed to compete with a professional juggler, who readily makes him the laughing stock of a jeering crowd. To teach him worldly wisdom and caution, he is allowed to fall into the hands of sharpers and cheats, who fleece him in fine fashion; and, finally, to make him virtuous, he is allowed to fall into vice—he is drawn through the mire in order that he may afterward be washed and experience the sensation of being clean. In outline, this is *Émile's* course in experimental ethics.

Though Rousseau, as before noted, does not define Nature, he makes it quite easy for us to infer what he means by the term, and a proximate definition would stand about as follows: *The material world affected by physical forces* (gravity, heat, light, electricity, etc.) *and inhabited by uncivilized men.*

For purposes of right education, *Émile* is to be pushed as far back as possible into this primitive and uncorrupted world; and society itself, in order to be rescued from growing corruption, must make a return toward this primitive simplicity and perfection. This was Rousseau's ideal education and his ideal state of society; but he had the sense to know that these ideals were impracticable, and so he accepts a compromise; he uses consummate art to reproduce a quasi state of nature, but this more than Herculean effort involves him in countless contradictions, absurdities, and follies.

Mr. Spencer personifies nature (Nature) and thus carries the myth to its most perfect development. With him, Nature is physical force personified, and education is experience, or contact with environment. His general theory may be summarized as follows: The individual of to-day must be educated just as the race was educated historically; the race was self-instructed through experience; the individual must therefore rely on his personal experience for his knowledge and training. As Nature was the tutor of the race, so Nature must be the tutor of each individual of the race. Of course, in accordance with this theory, the knowledge that is of most worth is science, for science has grown out of the experiences of the race; is, in the Aristotelian sense, a natural product; and is knowledge that can be reproduced and verified by each succeeding generation of learners. Past experiences constituting what is commonly known as history cannot be thus reproduced and verified, and therefore history is not knowledge proper. And as literature, a play of Shakspere, for example, cannot be rediscovered or reproduced according to the Spencerian dogma, there is no natural place in this system for literature and kindred subjects. Literature is too much tainted with art to fit into a scheme of education according to Nature.

Like Rousseau, Mr. Spencer is clearest when he applies his hypothesis to moral education. Prior to experience, an infant, if permitted, will put its little fingers in the flame of a candle. Let it do this, advises Mr. Spencer, even though a painful blister is the consequence. According to the same method the child may lay hold of hot fire-bars and spill boiling water on its tender skin. In this fashion the infant is being educated through experience by its godmother, Nature. This is a reappearance of Rousseau's doctrine of consequences. From this point of view education may be defined as experience coming from contact with matter and with physical force, or, in shorter phrase, with one's environment.

It may be urged against Rousseau and his disciples that the Golden Age of society is not in the remote past, but in the future—that humanity is making a forward movement, slow, perhaps, but sure; that what we call civilization will not be abandoned for savagery; that cities, Rousseau's especial abomination, are both a product and an agent of civilization; and that his assumption of the nobility of primitive man is an unsupported fiction. The untutored savage, as seen and described by travelers, is Nature's handiwork, a fair specimen of what she can do in the way of educating when unassisted by human art. It has not been observed, however, that men are made either happier or better by being allowed to revert to a state of nature.

Again, a proper conception of Nature will include man, his endowments, and his works. Is not man as natural a product as a beaver or a horse? If instinct is a natural endowment of the beaver, why are not reason, imagination, and language also natural endowments of man? Why make a radical distinction between the defenses built by beavers and the defenses built by men? Why is it less natural and right for men to live in communities than for bees and ants? Why is not a poem as natural a product as a bird's nest?

When Mr. Spencer asserts that "humanity has progressed solely by self-instruction,"[5] he either falls into an obvious error or he uses terms in an extraordinary sense. It would be as true to assert that humanity has progressed solely by capitalization. Men capitalize their experiences in labor-saving machines and in proverbs. One generation invents a snare, a trap, or a hook; the next generation is spared the effort of making these inventions, but simply accepts and uses them, and devotes the time and effort thus saved to the making of other inventions. Experience begets wisdom, this wisdom is embodied or capitalized in proverbs, and then these proverbs serve other men for warning and guidance in place of wasteful experience. Humanity has never squandered its time in reinventing and rediscovering. The "genesis of knowledge in the race" takes place through capitalization and discovery, and thus understood, it is quite true that the individual must follow the same course. Mr. Bain is evidently right in declaring that the assumption that the child's education is to be in the main a process of discovery or of rediscovery, is a "bold fiction." In some subjects, as mathematics and physical science, rediscovery is conceivable, but, in the main, impracticable; while in others, as history and literature, it is impossible, if not inconceivable. Mr. Spencer's hypothesis of Nature as the true guide in human education easily runs into the *reductio ad absurdum.* Let us see where this specious hypothesis will land us:

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[5] *Education*, p. 125.

This Nature is simply brute matter or brute force, absolutely divested of feeling, without sympathy and without pity; the teacher should therefore be the personification of brute, unfeeling force.

In her distribution of pains and penalties Nature never distinguishes between innocence and deliberate transgression—the same punishment falls on the infant as on the hardened criminal; the teacher is therefore to take no account of motive, but must regard the fact of transgression only.

Nature makes no distinction between a block of wood that falls from the roof of a house and a child that tumbles from a chamber window—for her use they are merely two pieces of matter, which she treats in the same manner, or, if she makes any distinction at all, she favors the block of wood, life and feeling here being at a discount; children should therefore be manipulated, shaped, and governed, as though they were inert, senseless matter.

There are no gradations in Nature's lessons, she deigns no explanation, she is as silent as a Sphinx; the graded school is therefore unnatural, and the teacher should be merely a stern and silent monitor.

I call attention to these absurdities, not because they are sanctioned by Rousseau and Spencer, but because they show the near limitations of this specious doctrine of Nature. Both these writers set up Nature as a criterion and guide, and they quote her in a free and easy way as standard authority for certain educational processes. Their argument runs in this wise: "Nature does so and so; therefore we should do so and so." But, evidently, this Nature does some things that no sane or moral man should ever think of doing. Mr. Spencer allows a little child of three or four years to lay hold of hot fire-bars with his little hands, but objects to his playing with an open razor. It is plain, therefore, that Nature is not to be followed at all lengths. Who is to decide how far, or in what cases, we are to follow Nature? Some who have had larger experience in the management of children than Mr. Spencer has probably had, would stop short of the fire-bars and the boiling water. It is a reasonable presumption, therefore, that we are not here dealing with science, but with opinion; and that it is an open question, not only how far we should follow Nature, but whether we should follow her at all; seeing how unnatural she sometimes is and how questionable some of her proceedings are.

Instead of accepting the poetical fiction that Nature (still using the term in the Spencerian sense) is our goddess and our guide, some of us who have not the fear of the new mythology before our eyes would respectfully maintain that this same Nature, in some of her work, should be disinfected, deodorized, and otherwise prevented from doing her worst. Only give her a fair chance, and Nature, in the form of scarlatina, diphtheria, or cholera, will decimate whole villages and cities. In such and all similar cases Nature is a remorseless, relentless fury, who is to be pursued, captured, and thrown headlong into the sea and miserably drowned. In other terms, and dropping figure, the joint work of Christianity, science, and civilization, is to subdue Nature, to make her man's servant rather than man's master, to make her minister to his joys rather than to his sorrows. There is to be a new earth, rescued from Nature and transformed by human art, and it is to be peopled by a race re-created by education and the Gospel; and throughout this secular process the dominant force is to be the human intelligence and the human will. The

Nature that we are to follow is "Nature humanized," or "Nature informed with humanity," to adopt the happy phrase of Richard Grant White.

So far, the treatment of my theme has been negative, in the main; the purpose being to show that the hypothesis of Nature as a faultless paragon is subject to grave limitations; that this general doctrine is very far from being safe and wholesome; and that like all other fads it seizes upon a fraction of a truth, fancies that it is the whole truth, and then proclaims the new marvel to the world with a cackling of delight.

I will now venture on a more positive treatment of this theme, and putting entirely aside whatever is mystical or mythical, will try to state in plain prose some of the things that seem to be implied in education according to Nature. I hope my hearers will do me the favor to remember that my purpose in this discussion is not controversy, but the discovery of truth. I aim at nothing more than interpretation. The writers who invoke Nature so persistently and so freely make no attempt whatever to define the term; they leave their readers to interpret the word for themselves.

In dealing with the precept "Follow Nature" the task of the interpreter is twofold: (1) to determine what Nature is and what she does ; and (2) then to determine whether it is wise to follow her in the cases stated. At this stage of educational science it is high time to disregard fiction, myth, and personification, and to give to this vague term an articulate meaning. My interpretation of the term Nature may not be the correct one, but it is an honest effort to reach the truth. Those who reject any given interpretation owe it to the cause they are attempting to serve, to state in plain terms their own interpretation.

The one word that most nearly interprets Nature, as it seems to me, is experience; and to follow Nature is to make experience the sole or the main source of our knowledge and discipline. It is usually said that there are two sources of knowledge, experience and language; but the precept "Follow

Nature" forbids the intervention of language as a source of knowledge, and makes the process of learning a course in personal experience. Experimental knowledge, it is claimed, is the only real knowledge; all we truly know is included within the circle of our personal experiences, of our sensations and of the inferences we draw from them. Rousseau sequesters Émile, so far as possible, from the society of men, in order that he may be tutored by Nature, that is, by experience. Instead of the mother, Mr. Spencer makes the candle-flame, the fire-bars, and boiling water the teachers of the child. Primitive man, we are told, had no teacher but experience; the successive generations of men have gained their knowledge in the same way; experience is therefore the typical process of human education, the only royal road to learning.

A few tests applied to this theory would seem to show its general unsoundness: Is history knowledge? On the hypothesis that the real test of knowledge is experience, there can be no such thing as historical knowledge, for we cannot be brought into personal relations with the events which have given rise to history. This high doctrine has been maintained on the floor of this Association.[6]

Is our knowledge of geography limited to what we have learned by travel? May we be said to know anything of the countries we have never visited? I once had a pupil who was a thorough convert to the Spencerian doctrine that there could be no knowledge where there was no personal experience. "Have you ever been abroad?" I asked. "No." "Then do you know that there is such a city as London?" "No." "How would you gain this knowledge?" "I would go there." "How would you know when you reached there?" So authority confronts us on every hand,—the new theory broke down at this point.

Again, on this hypothesis, what is the function of books? Possibly Mr. Spencer may have learned all his philosophy from his own observations and reflections; but on his own hypothesis why does he write so many books for other men to read? Scholarship and culture have always meant and will ever mean a loving devotion to good books.

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[6] At the meeting in Madison, Wis., in 1884, by Hon. John W. Dickinson.

I venture to say that the following statements are substantially true:

The process we call civilization is the triumph of art over Nature, and is a mark of human progress. Men will not renounce the essential concomitants of civilization and revert to a state of nature in pursuit of happiness or moral good. The men of each new generation will start forward from the vantage ground secured for them by their predecessors on the earth. They will accept and use the labor-saving machines which they inherit from the past, and without wasting time and strength in the effort to reinvent, they will capitalize their own experience and wisdom in some other or better labor-saving devices.

The knowledge gained by experience and experiment is capitalized and transmitted in books, and the great mass of men in each new generation will gain their knowledge by the interpretation of the books left by the wise and the good. The pretense lately set up that students in science are to gain their knowledge inductively, by personal research in the way of rediscovery, is a shallow fad. It would be just as reputable to counsel men to construct their own almanacs. Try to imagine a class of even university students attempting to rediscover the atomic weight of chlorine, or even the specific gravity of iron! If we commit ourselves to such folly at all, why not be radically and consistently foolish, and set about reinventing the apparatus of the modern laboratory? Students should certainly have some training in physical manipulation and experiment, but not on the pretense of rediscovery, but rather as a means of initiation into the processes of modern scientific research. The culminating absurdity of this doctrine of rediscovery is vivisection, which, as practiced in all ordinary cases, is nothing less than a crime.

Can virtue, in an intelligible sense, be capitalized, transmitted, and taught, so that in the moral life each generation may start from a higher vantage ground; or must we be remanded to an experimental ethics as our reformers would remand us to experimental science? This question cannot be argued at this time, but a little reflection will show that the world can grow better only on the hypothesis that the attainment of virtue is made somewhat easier for each succeeding generation. In other words, virtue can be taught; each child is not to construct a code of ethics out of his own experiences, but is to accept the highest code of ethics that humanity has bequeathed to him.

Interpreting nature in the sense of experience, or contact with environment, which is the prevailing sense in which Rousseau and Spencer use this term, and speaking only for myself, I find but little that is really helpful in the stock precept "Follow Nature," save this: It serves to keep alive the fact that learners are ever in danger of mistaking words for things, and so guards us against an education that is purely "livresque," as it has been styled. Thomas Hobbes uttered the same caution when he declared that "words are wise men's counters, but the money of fools."

I find much more help in a side-conception which appears in the *Émile* as a sort of undertone,—that there is an imminent tendency in civilization toward a distracting and unwholesome complexity, and that the need of the age is a return to simplicity. Rousseau's illustration of his meaning is very happy. Speaking of teaching children to read, he says: "We no longer know how to be simple in anything; look at the machines we invent for teaching children to read—cabinets, charts, and what not—all useless lumber; we do everything save the one thing essential: *creating in the child a desire to read;* do this, and all methods are good." As I interpret this phrase of Rousseau's educational philosophy, it is this: Follow main routes, abandon bypaths; strike at creative motives; occupy strategic or dominating positions; educate as artists paint—begin with broad strokes, leaving details for after consideration; imitate the unity of Nature, and instead of reducing a child to fractions treat him as an integer, making his education wholesome and humane.

The stress we put on training is the symptom of a general unsoundness. A trained horse or a trained pig is not a normal and wholesome horse or pig, but an animal artificially shaped and fashioned into a fraction or fragment. A thin glaze of bookkeeping converts an ignorant boy into a writing or adding machine, and unfits him for the functions of a man proper. Teachers are now being trained rather than educated, and these fractions tend to perpetuate fragments. The one great merit of the kindergarten is that it keeps children whole and allows them to grow by an organic process into symmetrical units. The danger of the graded school, and even of the college, is stratification,—the deposition of knowledge in layers by specialists; and the remedy for this and kindred evils is a return to a wholesome simplicity of nurture, to an education according to Nature.

In a more specific sense, we follow Nature when we adapt our instruction to the organic mode of the mind's activities. The mind is an organism having its own predetermined mode of activity. This constitutes its nature; and when we respect this order of procedure, in the presentation of knowledge, we may with scientific accuracy be said to follow Nature. When the mind works naturally, that is, in accord with the laws of its organization, it proceeds from aggregates to parts, from the vague to the definite, and, in childhood, from the concrete to the abstract; and the teacher follows Nature when he allows the mind to elaborate its knowledge in this order.

In conclusion, I venture to offer this bit of advice to those who are trying to make of their teaching a rational art: in your thinking and writing never allow yourself to personify the term Nature, but leave the mythologist, the poet, and the novelist, in sole possession of this deity.

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IV

THE LAWS OF MENTAL CONGRUENCE AND ENERGY APPLIED TO SOME PEDAGOGICAL PROBLEMS[1]

The nouns congruence and congruity, and the adjectives congruent and congruous, are derived from the Latin verb *congruere*, which means to come together with something, and so to agree. The nouns mean suitableness, appropriateness, consistency, agreement, coincidence, correspondence, fitness, harmony, and their adjectives mean pertaining to or having this quality. The words have respect to relations, and they are favorites with those philosophers who place virtue in the fitness of things. For men to render obedience to God, or for a son to honor his father, is said to be congruous to the light of reason. Incongruence and incongruous are the negatives of these words. Congruence may be affirmed of physical things alone, or of psychic things alone, or of physical and psychic things taken together, The element of time is involved. Congruence is simultaneous or successive. If successive activities are congruous, the first flows naturally into the second; they blend. The first leaves the body or the mind, as the case may be, in a suitable frame to enter upon the second. Particular attention may be directed to this point, because the argument of this paper will turn in large part upon the relations of successive psychic states.

I *Bodily activities as congruous or incongruous*—It is obvious that congruence must be affirmed of some physical activities, incongruence of others. No reference is here made to organic functions. Walking is a good preparation for leaping, wielding a hammer for shoving a plane. But violent exercise disqualifies the muscles or nerves for any activity that requires careful handling or delicate touch. The surgeon could not qualify himself for a difficult operation by first engaging in the vigorous exercises of the gymnasium, nor the painter fit himself for putting the last touches to a fine picture by crushing stones with a sledge. No more does the skillful teacher place the writing or the drawing lesson just after the school recess. We need not dwell upon the laws that underlie these facts further than to say that congruent exercises appear to involve, in whole or part, similar co-ordinations of the nerves and muscles and similar physical tones.

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[1] A report presented to the National Council of Education at Denver, Colo., July 8, 1895, by the Committee on Pedagogics.

II *Physiological and psychological states as congruous or incongruous*—That certain correlations exist between the body and the mind is too plain to be disputed; also certain oppositions or antagonisms. Mental power and tone depend upon physical power and tone, while states of mind influence states of body. Repose of body conduces to reflection, meditation, or musing. Strong physical exercise tends to exclude mental exercise. Still there are obvious limits to these effects. The Greeks laid stress upon maintaining balance or proportion between the body and the soul, but their great athletes and their great writers or orators were different classes of persons. Aristotle has left two striking testimonies relative to this subject. "The evil of excessive training in early years is strikingly proved by the example of the Olympic victors; for not more than two or three of them have gained a prize both as boys and as men. Their early training and severe gymnastic exercises exhausted their constitutions." "Men ought not to labor at the same time with their minds and with their bodies, for the two kinds of labor are opposed to one another; the labor of the body impedes the mind, and the labor of the mind the body."[2] This is at least measurably true, and the truth has important pedagogical applications.

III *The primary psychic elements as congruous or incongruous*—Cognition, feeling, and will are present in every fully developed state of consciousness. Dr. Dewey calls them "the three aspects which every consciousness presents, according to the light in which it is considered; whether as giving information, as affecting the self in a painful or pleasurable way, or as manifesting an activity of self. But there is still another connection. Just as in the organic body, the process of digestion cannot go on without that of circulation, and both require respiration and nerve action, which in turn are dependent upon the other processes, so, in the organic mind, knowledge is not possible without feeling and will, and neither of these without the other."[3] This is very well as far as it goes. It does not, of course, tell us whether the three elements are all present in the first, or simplest, state of consciousness.

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[2] *The politics* (Jowett's translation), VIII : 4.

The further relations of the three elements are of the greatest interest, and must be considered more carefully. Two facts are very observable. One is that up to a certain point the three elements vary directly; the other is that beyond this point they vary inversely. Until the mental current reaches a given height, cognition, feeling, and will swell together. That point reached, any one of the three must swell at the cost of one or both the others. Höffding, who does not, however, generalize them into a single law, presents these interesting facts:

"Self-observation reveals at most only an approximation to a state in which all cognitive elements have vanished. Such an approximation is reached the more the strength of the feeling element increases. Cognition and feeling must stand in inverse relation to one another; the more strongly the one is manifested the less the strength at the command of the other. An overwhelming joy or sorrow may drive out all ideation, all recollection; but an ecstatic condition of this kind stands on the margin of consciousness. . . . .

"It is only in the course of psychological development that differentiation between feeling and will makes its appearance. There comes to be an ever greater contrast between the two ways in which inner movement finds a vent. The psychological importance of the law of persistence of energy is here seen plainly; for the more energy an individual expends on the one kind of reaction the less can be expended on the other. This truth is strikingly illustrated in Saxo's well-known tale of the different effect which the news of the murder of Ragner Lodbrog produced on his sons. He in whom the emotion was weakest has the greatest energy for action."[4]

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[3] *Psychology*, pp. 17–18.

But of the writers on this subject whom I have consulted, Dr. Sully does it the fullest justice. Two paragraphs may be quoted:

"These three kinds of mental state are, in general, clearly marked off from one another. A child in a state of strong emotional excitement contrasts with a child calmly thinking about something, or another child exerting his active powers in doing something. If we take any one of these aspects of mind in a well-marked form, we see that it is opposed to the other aspects. Thus, strong feeling is opposed to and precludes at the time calm thinking (recollecting, reasoning), as well as regulated action (will). Similarly, the intellectual state of remembering or reasoning is opposed to feeling or to doing. The mind cannot exhibit each kind of phenomenon in a marked degree at the same time.

"This opposition may be seen in another way. If we compare not different states of the same mind, but different minds as a whole, we often find now one kind of mental state or operation, now another, in the ascendant. Minds marked by much feeling (sensitive, emotional natures) commonly manifest less of the intellectual and volitional aspects or properties. Similarly, minds of a high degree of intellectual capability (inquiring or inquisitive minds), or of much active endowment (active minds), are, as a rule, relatively weak in the other kinds of endowment."[5]

From the premises before us two or three important pedagogical rules are derived. One is that a gentle glow or wave of pleasurable feeling should play over the mind of the individual pupil and through the school. The intellect thrives best in a suitable emotional climate. Courage, hopefulness, appreciation, rather than their opposites, should temper the atmosphere of the schoolroom. Optimism is more congenial to the normal mind than pessimism. Another rule is that pupils should be protected against strongly excited feeling, no matter whether the feeling is their own or that of another, into which they enter through sympathy. The wheels of the intellect, so to speak, will not revolve freely in a flood of turbulent emotion. No gusts of anger, cyclones of passion, or waves of sympathetic impulse in the school! Especially is the feeling that the teacher is unjust very harmful to the pupil. No immediate reference is here made to morals. "Nothing retards the acquirement of the power of directing the intellectual processes," says Dr. Carpenter, in a striking passage, "so much as the emotional disturbance which the feeling of injustice provokes."[6] Again, genuine interest may reach too high a pitch. When Sir Isaac Newton saw that the train of reasoning which he had so long been following would establish his working hypothesis, his emotions would not allow him to continue, and he was obliged to hand his manuscripts over to a friend to complete the work.

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[4] *Outlines of psychology* (translated by Mary E. Lowndes), pp. 98, 99.

[5] *Outlines of psychology*, pp. 21, 22.

IV *The intellectual activities as congruous and incongruous*—Here we reach the application of the law of congruity to education that, considered from the point of view of the school, is the most important of all. So much will be admitted by those at least who regard teaching as the main function of the school. We must, therefore, proceed more slowly with this division of the subject. Still, it is not proposed to deal in detail with the nature or the relations of the cognitive elements. These subjects are treated in every text-book of psychology; and, although much of the treatment may be false, the commonly accepted views will answer the present purpose.

1. Here, as in the case of cognition, feeling, and will, we observe both mutual opposition and reciprocal aid. Up to a certain point cognitive elements grow together; beyond that point, the greater the energy expended on one kind of reaction the less can be expended on another kind. The com-

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[6] *Mental physiology*, pp. 134, 135.

plete action of perception involves memory; but energetic observation is at the expense of memory, while intense memory, on the other hand, tends to withdraw attention from surrounding objects. The imagination stimulates the thought processes until a point is reached where it assumes the ascendant and reflection retires into the background. Imagination and reflection, both in an excited state, cannot dwell together. Sense-perception furnishes the logical faculties needed materials; still, become too obtrusive, sense-perception is fatal to thought. Men or peoples who live in the senses do not live in the reason, and *vice versa.*

This point is pedagogically so important that we may well dwell upon it a little longer. The pedagogical realists make the sense-elements of knowledge prominent in the school. Originating as a reaction from excessive devotion to the printed page, the realistic movement has been most fruitful of good results. With it are identified the great names of Comenius and Pestalozzi. To it we are indebted for the enlargement of science-teaching, and the extended use of object-lessons and objective methods of instruction. At the same time, the true limits of realism are soon reached. Knowledge begins with the senses, but does not end with the senses. Properly speaking, a developing mind soon leaves the senses behind. Sensation is but a coarse form of feeling, and is subject to the same law. An excess of sense-elements in the mind smothers the rational elements. A blinding flash of lightning or a deafening peal of thunder arrests the higher mental activities; while less powerful sense-impressions exercise a more lasting, if a less intense effect. The great scientific discoveries have not been made in immediate contact with nature, but in the retirement of the study. Nor is time the only element that is here involved; when immediate contact exists and is vital, nature may overpower the mind. It has been said that the machine may be lost to the mind in its parts, or the picture in the colors that compose it. Equally may the universe be lost in the multitude of the stars. Concentrated attention upon the technic of an art retards the development of its higher elements. A house-builder is not likely to excel as an architect; the practical elements of the trade exclude the ideal elements that are essential to the profession. On this basis Aristotle's prejudice against useful studies rested, as is evident from the following passage:

"There can be no doubt that children should be taught those useful things which are really necessary, but not all things, for occupations are divided into liberal and illiberal; and to young children should be imparted only such kinds of knowledge as will be useful to them without vulgarizing them. And any occupation, art, or science which makes the body or soul or mind of the freeman less fit for the practice or exercise of virtue, is vulgar; wherefore we call those arts vulgar which tend to deform the body, and likewise all paid employments, for they absorb and degrade the mind."[7]

Abstract thinking—the thinking of relations and unities—which is the highest force of thought, is possible only when the mind has been unsensed or dematerialized. Whether instruction in physics should begin with theory or experiment is a mooted question. Begin where the teacher may, he has not taught the subject until he has taught those logical elements that give it its character. Still more, an excess of brilliant experiments may hinder rather than hasten the work. Experiments are like examples, of which it has been said:

> "Examples may be heaped until they hide
> The rules that they were made to render plain."

2. The practical application of the principles of congruence to teaching involves the selection and grouping of studies. It brings before us the large subject to which the terms correlation, co-ordination, organization, and concentration of studies have been somewhat indiscriminately applied. It is not proposed to discuss these terms in this report, or even the subject itself, save as it involves fundamental principles. But to do even as much as this makes it necessary to state the principal laws relating to mental energy. They are the following:

(*a*) When any stimulus as a sense object, an idea, or a lesson, is applied to the mind, the mind is not at once fully energized, but some time must elapse before it swells to the maximum of power.

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[7] *The politics*, VIII: 2.

(*b*) This maximum of power continues for a time, or, in the language of science, mental energy tends to persist.

(*c*) The maximum cannot, however, be indefinitely maintained. On the contrary, when the mental current reaches what may be called the fatigue point, it begins to fall off in volume, but the fall is less rapid than the previous rise. Still the volume can be temporarily renewed, in part or in whole, by the application of a stronger stimulus.

(*d*) An interruption of the mental current retards the energizing process, or frustrates the reaching of the maximum of power. Such interruption is caused by the introduction of incongruous materials. If the incongruity be of a marked character, the mind will come to a state of rest, or a new current flowing from a new center will be started.

(*e*) Through repetition the energizing process becomes easier and more rapid. Repeated activity in the same direction tends to groove the mind, or, to change the figure, the stream of activity digs out for itself a permanent channel of discharge.

(*f*) Mental power is of two kinds, specific and generic. In other words, the power that is generated in any activity can be fully used again in the same kind of activity, but only partly used in other kinds—the measure of the difference being the relative unlikeness of the two activities.

(*g*) Mental fatigue, like mental power, is also specific or generic. The mind may need rest from a certain kind of activity, or it may need rest from all kinds, or from all energetic kinds.

These psychic laws have their analogues in physical laws. The physiological psychologists find their causes in nerve and brain action, the explanation going back to the familiar functions of waste and repair. Moreover, these laws cannot be stated in quantitative terms. No one can tell, in general, how long it takes fully to energize a mind at a given time, or how far removed the fatigue point is from the initial point of greatest energy. Very much depends upon age, discipline, physical health, the character of the stimulus, and other circumstances. As a rule, the periods lengthen as the individual passes from childhood to youth and from youth to manhood. That is, a man's mental force is less quickly aroused and mobilized than a child's, and it tends to persist much longer.

3. From the laws of congruence and energy we derive some important rules of teaching. While these are applicable to all grades of teaching, they are particularly important in relation to primary teaching. The principal of these rules may be formulated as follows:

(*a*) Sufficient time must be allowed the pupil for him to collect his energies, to mobilize his forces. Slow and halting recitations tend to dullness of mind, while rapid recitations develop either confusion or shallowness. There must be a certain singleness or isolation of the fact or idea. "The child must be accustomed to give one impression time to take root," says Radestock, "and not follow it immediately by a corresponding action, that it may not pass away with that action into air."[8] The same writer quotes the following from Lazarus with approval: "Deep thinking requires time; it is therefore a great pedagogical mistake if teachers, as is now generally done, urge their pupils to answer rapidly, and praise those who immediately have an answer ready. This causes everything to be lowered to a mere effort of mechanical memory. The pupil should be given time for individual contemplation, for deep and energetic thought labor." This does not imply that lessons are not to be well prepared and subjects well thought out beforehand. When the fullest preparation has been made, there is still opportunity for energetic thought at the time of the recitation.

(*b*) The pupil should be held to the same subject as long as the mental current flows with full volume. To no new subject can all the energy that has been aroused by any activity be transferred, and to some subjects none whatever. Unnecessary changes from subject to subject, or from lesson to lesson, involve the dissipation and consequent loss of both time and power, the amount of which will depend in great part upon the relative congruity or incongruity of the different subjects or activities. More power can be transferred from Latin to Greek than from French to German. This is Dr. Bain's physiological explanation of the rule laid down: "We know well enough that the nervous currents, when strongly aroused in any direction, tend to persist for some time; in the act of learning, this persistence will count in stamping a new impression; while part of the effect of a lesson must be lost in hurrying without a moment's break to something new, even although the change is of the nature of relief."[9]

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[8] *Habit*, p. 36.

(*c*) Advantage should be taken of favoring times to do, or to secure the doing of, certain kinds of work. The more difficult subjects should be pursued by a pupil or student when both body and mind are fresh and vigorous. It is the flood-tide, not the ebb-tide, that brings the great ships up to the dock.

(*d*) Before the pupil reaches the fatigue point, the teacher should permit him either to take up another subject or to drop study for the time altogether. Persistent application on a stream of falling energy involves waste of time and power, and may lead to serious results. To some extent, no doubt, the needed relief can be had through a change of method.

(*e*) Whether the pupil should take up a new study, or drop all study for the time, depends upon the kind of fatigue that has supervened. Diminished power for one activity is not diminished power for all activities. Thus, a pupil who has studied arithmetic or algebra as long as it is profitable to-day, will take up geography or history with interest, and *vice versa*. To a degree studies are like gases, they are vacuums one to another. As a jar that is already filled with hydrogen gas will still hold as much carbo~~l~~nic acid gas as a jar of the same size that is empty, so a pupil that is satisfied for the present with mathematics will pursue literature with interest and profit.

(*f*) The school course of study should be made up with constant reference to the psychic laws that have been laid down. Into the question how far psychology and how far environment should control the educational ideal, we need not enter. No one denies that psychology must largely influence the choice of studies, and almost wholly control their co-ordination.

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[9] *John Stuart Mill*, p. 23.

(*g*) The working programme of the school, in particular, should be made up with reference to the same principles.

(*h*) The principle of congruence and its limitations have important applications to elective studies in colleges and universities. In filling out election blanks, it is believed students who are left wholly to themselves often choose studies that make strange bedfellows. Nor is this surprising; the criteria that should govern the choice are considerably subtle and intricate. This topic will come before us again.

The arguments on which the three last rules rest are practically the same. They involve the important subject of concentration. Congruent studies re-enforce one another with respect to both content and mental aptitude. One subject involves other subjects. The physicist must be a mathematician, the Latin scholar must know something of Greek, the historian must be acquainted with politics and political economy. For a time depth and breadth vary directly, after that indirectly. But in the absolute sense a specialist is an impossibility. An astronomer cannot study the moon by itself, or a physiologist the eye. No one object or subject can be understood when taken alone: it is related to other objects, it is a part of the universe. Still, to be effective the mind must be grooved, and this involves the repetition of the same act and of similar acts. Once more, if the practical requirements of the school compel a study to be discontinued before the fatigue point is reached, thus departing from the ideal, then some related subject may be taken up, because more of the power that has been accumulated can be transferred to a related than to an unrelated subject. And still the distance of the fatigue-point must be considered.

4. But congruence alone must not dictate the course of study,

the daily school programme, or the student's elections. Fortunately, there may be power for one subject when there is none for another subject. We have spoken of the mind under the similitude of a stream or current. The fact is, however, that the mind is less like a river from which you may take water for any purpose, than it is like a bank where the total amount of money that is on deposit is divided among many different accounts, and is subject to check by as many different persons. This is due to specialization of powers—to the difference between specific and generic force. The one-study college is, therefore, just as unphilosophical as those schools that break the work hours up into small crumbs of time. Thus the fundamental laws of mental energy, or of interest if you will, impose a veto upon an exaggerated form of concentration.

It is further to be observed that concentration is a relative term, at best. No wise teacher proposes to limit the pupil to a single study or class of exercises. To do so would in reality involve the dogma of formal discipline in its extreme form. Another remark is that concentration in the primary school may be overdone as easily as specialization in the higher school. It has been shown time and again that the child may be overtaught certain subjects. His impressible mind may be so deeply and narrowly grooved that it can never be broadly cultivated. It becomes indurated, as it were. This result may be due in part to the intensity of the activity, but it is more due to its persistence. As the mind matures, there is less and less need of caution on this point. The pupil gets farther and farther away from the mechanical elements of knowledge, becomes more and more occupied with the higher logical elements, and so is less responsive to narrowing influences. While the child's activities must be duly limited, his full development still calls for a profusion of educational material.

At this point some very practical questions confront the teacher and superintendent. How long should a pupil be kept at work on the same subject? How much work should he do in one school-day? How frequently should he change from one subject to another? How many studies should he have?

No man can answer these questions in formulæ; the teacher or superintendent must answer them as they arise, and to do so he will find his best observation and judgment seriously taxed. It may well be doubted whether, measurably, the common schools are not now sacrificing the best results to swollen programmes and short exercises. The question is one that the superintendent should study with a transcript of the facts that have been stated in one hand, and his course of study and time-table in the other. There is no reasonable doubt that much evil in the school that is now charged to the account of overwork, should rather be charged to work done in the wrong way.

5. The psychic facts to which the names of congruence and energy have been given, demand fuller investigation than they have hitherto received. It is well known that school programmes, both in respect to the co-ordination of subjects and the length of exercises, commonly rest upon a rude empirical basis. The factors that control those who make them appear to be the necessities of the school, real or supposed, tradition, and individual experience. This empiricism is not surprising, considering the meager attention that psychologists and pedagogists have given to the principles that underlie good school programmes. Very little attention has been given to the time elements involved in psychic energy, as applied to school exercises. When three heavy subjects appear upon the programme for the day—subjects demanding the fixation of the attention—you will not indeed commonly find them all crowded into the same session; but that is about as far as the attempt to accommodate the work to the pupil's ability in this regard has been carried. Such delicate questions as these occur: How much time elapses between the application of different stimuli to the child mind at different ages, and the development of maximum psychic power? How long is the interval between such maximum and the fatigue point? In respect to the swelling of the mental current to its full volume, and in respect to its persistence, how much depends upon the pupil's age? How much upon the peculiar stimuli at different ages?

And how much upon the teacher's skill? It is easy to translate these questions into the practical interests of the school. They cannot be answered without much careful observation and collaboration of facts. The whole subject should enlist the serious attention of students of child study, both under its physiological and psychological aspects, and it is earnestly recommended to their attention.

6. The correlation of the teacher and the text-book, if one be used, demands something more than passing attention. Dr. Bain has said that undoubtedly the best of all ways to learn anything is to have a competent teacher "dole out a fixed quantity of matter every day, just sufficient to be taken in and no more; the pupils to apply themselves to the matter so imparted, and to nothing else. The singleness of aim is favorable, he urges, to the greatest rapidity of acquirement; defects should be left out of account until one thread of ideas is firmly set in the mind. Still he admits that not unfrequently, and not improperly, the teacher has a text-book to aid him in his work. "To make this a help and not a hindrance demands the greatest delicacy, since the pupil must be kept in one single line of thought, and never be required to comprehend upon the same point conflicting or varying statements. Even the footnotes may have to be disregarded in the first instance, since they act like a second author, and so keep up an irritating friction."[10]

Nothing else is so essential to successful elementary teaching as unity or congruence of subject matter. Dr. Bain does not exaggerate the value of the "one thread of ideas," or the "one single line of thought." His scruple about footnotes even is often justified. These more definite rules will determine the teacher's general relations to the text-book.

(*a*) If the book is the main source of instruction, the teacher should teach the book; that is, the matter of the book. If footnotes tend to confuse, what shall be said of the teacher who takes an independent line from the beginning? No wise teacher certainly would be so absurd as to give a pupil who is just beginning a new subject two text-books. A good Sunday-school teacher, dealing with the life of Jesus in a primary class, would not try to follow all the Gospels, or even two of them, at the same time; rather than do that, it would be better to select his material here and there and to blend them in a new gospel of his own. The teacher may teach something more or something less than the book teaches on a single point, but nothing different or contradictory.

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[10] *Practical essays*, pp. 218–219.

(*b*) The teacher should also follow the methods of presentation that the book employs. Nothing could be more absurd than for a teacher who has assigned to a class a book lesson that is presented inductively, to go ahead and teach it deductively.

(*c*) The teacher should study to make the first presentation of a lesson successful. If two or more presentations are required, besides the loss of time, the mind is left in a littered-up condition that is confusing. This is the reason why it is often more difficult to teach a subject well to a pupil to whom it has been imperfectly taught, than to a person to whom it is wholly unknown.

(*d*) If the subject-matter of the book or of a single lesson is radically bad, or the method decidedly faulty, the book or lesson should be laid aside altogether. If only certain portions are objectionable, or certain methods of presentation, the teacher should not assign these to be studied, but should teach such subjects *de novo*. This observation assumes that the teacher is able to do so.

(*e*) The wise teacher will not present a subject in more than one way, unless the first way has failed. It is folly to explain the division of a fraction by a fraction in a second way, if the first explanation has been understood. The same remark will apply to casting interest and to many other subjects. It is well enough for the author of an arithmetic to give two or more methods of performing these operations, thus giving the teacher an option; but the teacher should choose the method which he thinks best adapted to his purpose, and then adhere to it. At the stage of teaching now supposed, never give more than one definition or rule on a single point. Superfluous illustrations also not only do no good, but they do positive harm, begetting confusion worse confounded.

It will be understood that these rules relative to the use of the text-book apply to the early stages in teaching particularly, and that they would require very important modifications if they are to be applied to the advanced, rational, or critical stage of education. Narrow teaching must come before broad teaching. In time the pupil, if rightly handled, will get out of his single line of thought; will be able to deal with subjects; can criticise and weigh different definitions, contradictory views and rules, and opposing opinions; can use a variety of books, compare authorities, and employ different methods of procedure. Thus Dr. Bain recommends that in geometry the pupil should be held strictly to Euclid until he has become thoroughly at home on the main ideas and leading propositions; then he is safe in dipping into other manuals and comparing the differences of treatment, and in widening his knowledge by additional theorems and by various modes of demonstration. But the time when all this can be done will not be hastened by pushing the pupil forward prematurely. The teacher who inundates the pupil with all kinds of things is the pupil's worst enemy, unless, indeed, it be the teacher who keeps him too long and too intensely harping on the same string. It is only the knowledge that really energizes the mind which is valuable.

7. It has already been remarked that the laws of congruity and energy bear on the college or university student's choice of electives. How many subjects should such a student have at the same time, and what should be their relations? Should he scatter his energies over a considerable field, or concentrate them on a small one?

Professor Trowbridge, discussing some years ago the subject of economy in college work, urged that the Harvard student should study two subjects for at least three months, and two subjects only; one of these should be a hard subject, giving plenty of opportunity for application, while the other might be a comparatively light subject that could serve as a mental rest through the change which it afforded. At the end of three months two other subjects might be taken up, and the first ones be relinquished for a time and so on to the end of the course. After observing that some studies are so nearly related that intellectual effort in one is of service to another while others are not: that Latin and Greek, philosophy and history, political economy and history, are examples of the one class, while German and French, chemistry or physics and philosophy, are examples of the other, he examined the nineteen or twenty subjects which formed in the main the elective curriculum of Harvard University. He found that the division of subjects could be reduced to twelve by grouping together the subjects which aid each other, as follows: Latin and Greek; French and French history; German and German history; political economy and history; chemistry alone, or in conjunction with English; Spanish and Spanish history; philosophy and history; physics alone; Semitics and ancient history; fine arts and music with English, or fine arts and music as a let-up with any of the severer studies; mathematics and English; romance philology and its suitable language. Having twelve subjects, the student could pursue three of these in the nine months of each college year, and in four years he could accomplish the whole twelve, provided, of course, he wished to take all the subjects enumerated.[11]

This scheme has been introduced mainly for the sake of illustration. In criticising it we should remember that at Harvard University all studies are elective, save only a modicum of English and physics. Although propounded for a laudable purpose, the scheme is open to one or more serious objections. Within the successive three months' periods, study is certainly over-specialized, and particularly in the first college years. The common Freshman will not, and cannot, work up his available power on one main line of study. The laws of mental energy are violated. The range of interests is too narrow. In the later years of the course this objection would be less serious. Other important questions, as whether the time allotted would be sufficient for the leading subjects, occur, but they need not be considered. This branch of the subject is dismissed with the remark that college electives call for a fuller examination than they have yet received, particularly in respect to the principles that shall underrun electives and practical administration. There is good reason to think that in some quarters, at least, *laissez faire* has been carried too far.

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[11] *Atlantic Monthly*, November, 1888, pp. 671–672.

8. The last topic to be mentioned is graduate study. While there is not, or at least should not be, a chasm between undergraduate and graduate work, still there are palpable differences of ideal and method involved. The first period looks to general cultivation. The second period looks to special cultivation. The undergraduate need not lay equal stress upon all the studies that he pursues; he may emphasize some more and some less; but he should not sacrifice general culture to Greek scholarship, Latin scholarship, mathematical scholarship, or any other kind of special scholarship. The graduate student, on the other hand, should go much farther on the road to specialization, and particularly the candidate for the doctor's degree. But even here specialization may be overdone. It is not desirable that the student should confine himself for three years to a special line of study. The first objection to such a course is that it is overgrooving the mind at the time of life supposed. Even the graduate student should not lose sight of general cultivation, and fall into stark professionalism. But secondly, a single study will not absorb to advantage the student's power. It will be carried on in derogation of the law of specific and generic fatigue. One brain tract will be overworked, while others are neglected. If the professional man needs a let-up, or an avocation, to keep his mind out of the ensnaring groove, still more the student who is yet lingering in the schools.

How many subjects then should the graduate student have? The answer will depend somewhat upon the student himself, as well as upon other considerations. As a rule, there should be at least two distinct lines of work, one of which may be heavy, and one light. The first may include different subjects chosen with reference to congruity, as Greek literature and Greek history; Latin literature and Roman history; but there should certainly be a second distinct line of work, separate and apart from the first one, also made up with regard to congruency, that will at once cultivate breadth, and also consume time and power that the main subject cannot appropriate.

At this point a cautionary remark may be dropped. It is a mistake to suppose that subjects are congruous, merely because they bear the same name in part. Congruity is determined by elements and not by words. For example, how much have Greek literature and Greek antiquities, or Latin literature and Roman Antiquities in common? Certainly less than some enthusiastic scholars are wont to assume.

It will no doubt be said that this report is conservative on the subject of specialization. This is no accident. There is in the opinion of the committee good reason for reconsidering the relations of education and erudition. Professor Davidson says it is the failure to draw this necessary distinction that is misleading our universities into the error of allowing students to "elect" specialties before they have completed the cycle of education; the result of which is that we have few men of thorough education or of broad and comprehensive views.[12]

Professor Butcher, contending for the unity of learning, declares that it is at present endangered by disintegrating tendencies. "Conceive, if you can," are his words, "a world of specialists, in which each man's vision and labor are concentrated on some microscopic point in the field of human activity, and the very idea of a political and social organism disappears. There is a point at which the subdivision of labor in the intellectual sphere must be checked, and some unifying principle introduced, if we are to retain any rational conception of man, or of the world, or of human life." [13]

And finally, Professor Paulsen sounds a note of warning from the greatest of the German universities. Pleading for the unity of the university, he speaks of the danger of disin-

[12] *The Education of the Greek People*, p. 23.

[13] *Some Aspects of the Greek Genius*, pp. 209–210.

tegration through the diminished influence of the faculty of arts. "Of course," he says, "there is no possibility of retrogression in the division of labor, upon which depend the mighty advances of scientific research. We are called upon, however, to oppose the spirit of 'specialism,' of over-narrow self-confinement and small-souled satisfaction with one's self; and everyone who belongs to a university is likewise called upon to help along the opposition." Dr. Paulsen suggests several remedies, the principal one of which is the maintenance of the old conception of liberal culture. "In particular, the tendency toward generalization of study, the philosophical sense which ever stands ready to turn the details to good account in the service of the ultimate and highest insight, must always find its proper home in the faculty of philosophy. Herein may be found a peculiarly appropriate field for 'public' lectures; to present to a wider circle of hearers, to the disciples of all related branches of learning, whatever problems and results of general interest are included in a special subject."[14]

The purpose of this report may now be briefly restated. It is to apply the law of mental congruence as limited by the laws of mental energy to some important pedagogical problems, as the fabrication of a course of study, the making up of a working programme for a school, the choice of college electives, and the whole subject of graduate study. Congruence means the meeting or bringing together of things that are consonant or related; and as applied to the problems enumerated it looks to the deepening, broadening, and strengthening of study and teaching by co-ordinating those studies and elements of studies that by their nature tend to support and re-enforce one another. It is hoped that the report may prove useful as a basis for further study.

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[14] *The German Universities* (translated by E. D. Perry), p. 234.

V

THE RURAL SCHOOL PROBLEM[1]

This report has reference only to questions which concern schools in the rural districts and the smaller villages, in which no attempt is made at grading the pupils. The aim has been to make it strictly a business paper, dealing with facts and with theories which are both practicable and of immediate importance. Early in the spring your committee sent to each State superintendent a circular asking for information concerning revenues, organization, and preparation of teachers for ungraded schools. The plan of supervision, attendance, and the course of study were included as incidental. Replies were received from twenty-five States, viz: Iowa, Illinois, Indiana, Ohio, New York, South Carolina, Florida, California, Nevada, Maine, Kentucky, Texas, Minnesota, Missouri, Michigan, Rhode Island, New Jersey, Nebraska, Mississippi, Delaware, Massachusetts, Montana, Pennsylvania, Virginia, and Wisconsin. In addition a large number of State reports have been consulted as furnishing desirable information. The information thus gained is embodied in the report in the following order of subjects: revenues and distribution of the same; organization of schools; supply of teachers.

REVENUES

The school funds are derived mainly from three sources, namely: permanent or invested funds, State tax, and local taxes imposed upon towns or districts by vote of the inhabitants. Local taxes are imposed in each of the forty-nine States and territories, including the District of Columbia; thirty-nine have what is termed a permanent school fund, the interest of which is distributed in support of the schools, but the principal to remain inviolate. Thirty-one supplement the proceeds of this fund by State tax. Ten have no permanent school fund; seven of these support their schools by State tax alone; and three by local tax.

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[1] A report presented to the National Council of Education at Denver, Colo., July 5, 1895, by the Committee on State School Systems.

In preference to any attempt at tabulation we have made extracts from answers received to the circular, and from State reports, as showing the trend of opinion in the different States.

It will be noticed that while the answers and suggestions differ in accordance with the civil organization of different States, there is substantial accord of sentiment in favor of a change in the method of taxation; and that school district taxation especially meets with little favor. These quotations could be largely increased, if necessary, but the length of this paper will not admit of it. They look to some way of obtaining a remedy for the gross inequality which exists not between the city and the country schools, but between the ungraded schools in different districts of the same township.

The quotations are as follows:

Kentucky—As revenue to pay teachers and superintendents, we would prefer county taxation after, and as supplemental to, State taxation.

Missouri—Revenues for the support of the ungraded schools are derived chiefly by a direct tax levied only by each district. I prefer a township tax.

Mississippi—I believe in a mixed revenue system; the State providing a certain proportion of the money necessary to maintain schools and distributing it to the county, township, or district, as the case may be, upon the basis of educable children. This is to be supplemented by a county tax distributed to the townships or districts, on the basis of educable children; the townships or districts being permitted to levy such additional tax as they may see fit.

Texas—The revenues for the support of the ungraded schools derived from local sources are very small. I should very much prefer a good, liberal, county school tax, to any other means of local support.

Florida—I would prefer a State levy, with county option to increase it.

Nevada—I prefer the county tax.

Maine—I prefer a tax raised upon the entire township.

Montana—Revenue is raised by county taxation. I prefer this method.

Pennsylvania—I incline to the opinion that a levy by the county would be more equable. Some townships in this State levy no tax. Others levy the maximum limit allowed by the law, namely, thirteen mills for building purposes, and thirteen mills for maintenance.

Indiana—We can make a levy anywhere from one to thirty-five cents on each one hundred dollars and may go as high as fifty cents on the polls. We like the township system in this State because it is so much cheaper.

Wisconsin—The revenues for the support of the ungraded schools are raised in part by the district, part by the county upon different townships, and in part by the State. It would seem more equable if raised by the township instead of the district.

South Dakota—Under our constitution we cannot have State uniformity of school taxation, but for school purposes we can provide for county tax levies that shall relieve the weak districts from the greater part of their burdens. This would be much better than our present method of taxation, under which the local school tax in some districts has been, at times, as high as twenty mills, while in other districts having equally good school privileges, the levy for the same years has been only five mills or less.

Massachusetts—The Massachusetts Teachers' Association resolved that, for the purpose of enabling the poorer towns of the commonwealth to have the continuous service of trained teachers, adequate assistance should be afforded by the State, and for this purpose an enlargement of the State school fund should be made. Our revenues are wholly from town and

State, principally from town tax. The low valuation of small towns makes it desirable to have a larger contribution from the State.

Minnesota—The taxation by districts is, in the highest degree, unequal, and exceedingly burdensome to the smaller and weaker ones. In some the tax is one mill on the dollar, while in others it reaches twenty-nine or thirty. The districts that really need the best schools have the poorest, the school year is the shortest, and the poverty-stricken inhabitants actually pay the highest tax.

Wisconsin Report, 1893–94—When taxation is made equal throughout the townships, the smaller districts will demand equal consideration with the larger ones in the selection of teachers and in the equipment of the schoolhouses.

Washington—In my judgment, if the policy is to be continued of allowing the county commissioners to levy the school tax, they should be compelled to levy such a tax as will produce a specified amount for each child of school age in the county, and that amount should be such as, with the State apportionment, would provide for each district an ample fund for a reasonable length of time during the year.

Vermont—If the town as a social unit provides the major part of the revenue for the public schools by an equal taxation, it should also disburse such revenue. It is a fallacy to think that equalization of taxes and the district system are compatible.

The spirit of our institutions is that of equality before the law. A system of schools which does not provide school facilities to all children within its limits is not an American system. To put this in different words: an American system of schools should seek so to equalize the burden of taxation that weak and impoverished districts, with a low valuation, should still be able to maintain a school equal in length of term, or in its equipment, to other schools of the same grade in that township or county.

Many excellent reasons can be advanced why the State should bear the entire burden of taxation necessary to the purpose of common-school education. These reasons are, however, more than counterbalanced by the objection that it would remove the schools too far from the people, and would diminish the interest which they ought to have in providing means necessary to the rightful instruction of their children. It is the policy of our government to impress upon the people the fact that they are the government, and that everything which tends to strength and permanence comes from their united and intelligent action. While we believe that it is right that the State should provide a generous amount, either by a tax of a certain number of mills on each dollar of valuation, or by a certain fixed sum in the aggregate, we also believe that local taxation is necessary to the healthful growth and prosperity of the schools. The question is, What should be the unit of taxation? Your committee are unanimous in the opinion that the system of district taxation, in use in many States, is both unjust and vicious. The argument is founded upon facts. Wherever there is a sparsely inhabited district, or one in which the valuation is low, the school interests suffer for want of sufficient support. Thus in one district the children must put up with a cheap, incompetent teacher, and with six months' school, while, across an imaginary line, children have the advantages of a good teacher, and of nine months' schooling. This is not in accordance with the spirit of free schools. It is true that the same discrepancies may exist to a diminished extent between different townships, and hence there has arisen the thought that the county is probably the best unit of taxation. This question must be settled very largely by the civil organization of the State, and by the character of its population. In the older States, where the population has some degree of permanency, and where the township organization has a clearly defined relation to the State, probably the township furnishes the best unit. On the other hand, in the newer States, sparsely populated, or in States in which the population is largely transitory, or engaged in occupations which do not encourage the owning of homes, the best unit is the county. If the point is raised that it is unjust thus to tax the wealthier portions of a county or township to support schools from which they can derive no benefit, the only answer is that we not only educate the child at the public expense for the child's sake, but also for the sake of the civilization in which he is to live. The State as a State has an immediate interest in the future of every child who is to become a citizen. We reach these conclusions, then: that the unit should be the county or the township, and that the law should be mandatory, compelling the levying of an amount as a minimum, which, added to the revenue derived from the State, would furnish reasonable school facilities to every child living upon that territory. This, however, should not prevent any community from imposing additional taxes upon themselves if facilities of a higher order are desired.

The ungraded schools need this protection. They are suffering from low wages, short terms, and incompetent teachers. The question of insufficient finances is at the foundation of the trouble. We have solved one equation of the problem when we have adopted the most equable and acceptable method of supplying funds.

DISTRIBUTION OF REVENUES

A question of equal importance presents itself in the methods of distributing revenues. In most of the States the distribution is based upon the number of children of school age in the township or district. This offers the temptation to swell the number included in the school census to its utmost limit in order to obtain a larger share of money from the State funds. The injustice of it is more clearly seen in the fact that the number of residents between certain ages furnishes no criterion of the actual school necessities of the district. It is as far out of the way as it would be to base the distribution of school funds upon the assessed valuation of the territory in question, or upon the number of people of all ages.

These two points are to be kept in view. The funds must be distributed so as to equalize, as far as possible, school privileges and at the same time stimulate the community to take advantage of the opportunities thus afforded their children. A few extracts from letters and reports will illustrate the methods in use at present, and also show the trend of educational opinion.

Illinois—The State apportions the amount derived from the State school fund to the common schools, on the basis of the number of persons under twenty-one years of age residing in the counties, as shown by the national census.

New Jersey—Our ungraded schools derive most of their entire revenue from this State in the following manner: two hundred dollars per each teacher employed, and the balance per capita according to school census.

Pennsylvania—The revenues for the support of the ungraded schools in Pennsylvania are distributed on the basis of the number of taxables at the triennial assessment.

Florida—The one-mill tax is apportioned among the counties on the basis of the average attendance upon school.

Mississippi.—The money is distributed to the counties and separate school districts on the basis of educable children in each.

Nebraska—The interest of the permanent State endowment is apportioned to the school population.

Rhode Island—The State money for schools is divided in all the cities and towns upon two different plans. Each town gets one hundred dollars for each school up to fifteen in number, and after that, all that is left is divided in proportion to the number of children of school age.

Minnesota—The current school fund is apportioned to the districts in proportion to the number of pupils who have attended school at least forty days in the year.

Virginia—State school money is apportioned on the basis of the school population.

Ohio—The auditor of the State shall apportion the State common-school fund to the several counties of the State semi-annually, upon the basis of enumeration of youth therein. But the law in another section provides that so much of the contingent fund as may be set apart by a township for the continuance of schools after the State funds are exhausted, shall be so apportioned by the board that the schools in all the subdistricts of the township shall be continued the same length of time each year.

Iowa Report—The suggestion made by my predecessor that the apportionment of money at present derived from the interest of the permanent school fund and other sources, should be based upon the average daily attendance for the preceding year, as reported by the county superintendent to the superintendent of public instruction, carries with it much force. It seems the only just and equitable way, when we consider that the money would thus reach those schools in which there is the most work to be done on account of the large number of pupils. In fact, such an enactment would doubtless increase the attendance and act as a very efficient auxiliary to a compulsory law.

Washington Report—The manner of apportioning the common-school fund among the various districts is a matter that has often been the subject of interesting discussions, and, while the method at present in vogue seems not to have been very seriously criticised since its adoption, there are grave doubts as to its efficacy in accomplishing the best results possible with the fund at our disposal.

South Dakota—The apportionments of State and county general school fund should be based on the total attendance as shown by the annual reports of district clerks and not on the total number of persons of school age. When the amount of each quarterly apportionment is made dependent upon the school attendance, there can be no doubt that more pupils will be enrolled in our schools than there have been heretofore, and that their attendance at school will become more regular. Such an amendment would probably increase the per cent. of attendance much more rapidly than our compulsory attendance law has yet done.

New Jersey Report, 1893—A fair distribution of State school moneys would require that a part, if not all, should be apportioned on the basis of the number of pupils actually enrolled or taught in the schools, and not, as now, wholly on the basis of the number of children of school age, whether enrolled and taught or otherwise.

It is plainly the consensus of opinion that the prevailing system of distributing school funds, *pro rata*, upon the school population as a basis, is detrimental to the interests of the rural schools. The result of this plan of distribution has been to give an undue advantage to the schools in the strong districts, and to leave those in thinly settled and impoverished districts helpless and unprovided for. Several States have already sought a remedy. If it is right to tax all for the benefit of all, then it is just so to distribute the funds thus raised as to accrue to the advantage of the entire community.

The most feasible methods of distribution cannot be discussed without reference to the next topic in this report, that of organization. We, however, cannot fail to reach the conclusion that justice to the rural schools demands that some method be devised, which will insure a reasonable support to the weakest school, and at the same time act as a stimulant in obtaining the highest possible per cent. of attendance.

ORGANIZATION

The limits of this report will only allow us to say that, with but very few exceptions, the judgment of State superintendents, as gathered from their replies to the circular sent to them, and from various State reports, is strongly in favor of the township as the unit of organization.

A few extracts from these papers must suffice. However, the old maxim applies: "From one learn all."

Missouri—I prefer the township system because it operates on a larger scale, and is likely to give expression to the sentiment of better men.

New Jersey—Hence it is that the system [district] introduced many years ago, whereby townships were divided into school districts to fit the then prevailing conditions, is to-day antiquated, inefficient, and expensive.

Michigan—We prefer the township system because it would lead to a uniformity of text-books, taxation, length of school year, for all of the children of the township, and equal facilities so far as teachers and apparatus are concerned.

Wisconsin Report, 1894—In my judgment the substitution of the township for the district as the unit of the system would result in the increased efficiency of the common schools.

Mississippi—I believe the township system is the true philosophical system for public-school organization, although we cannot reach it, owing to uneven distribution of population.

Texas—I prefer the township system, with the county system as a close second choice. The district is too small to permit the organization of schools of different grades. The county is larger than necessary. The township is free from both objections.

Pennsylvania—We prefer the township organization to district and county organization.

Indiana—We tried the district system several years ago, and should consider it taking a long step backward to drop the township and take up the district system again.

Vermont—It is doubtful if any law [township system] enacted in the State of Vermont, received under such antagonistic and discouraging circumstances, ever won more or stancher supporters than our present law during the short time it has been in operation.

Ohio—To anyone who will take the trouble to give this subject careful study, the conclusion will be evident that the township is unquestionably the correct educational unit.

Iowa—The only feasible remedy for these evils is to return as soon as possible to the provision of the organic law of 1858, making each civil township a district for school purposes.

New Hampshire—The most far-reaching change made in the last ten years has been the substitution of the town system for the effete and impotent system of district schools. The district school had lost much of its usefulness, and was, in many towns, no longer susceptible of improvement. Under the town system it is regaining its power, and a better educated class of children is growing up in the rural sections of the State.

Rhode Island—As fast as our towns have abolished the district by their own vote, they at once begin to consider the matter of a high school. So long as the districts exist we shall not have high schools, but if we can get rid of the districts we shall ultimately be able to provide high-school facilities for the greater part, if not for all, of the children of the State.

The principal arguments in favor of making the civil township the unit may be stated briefly as follows :

1. Effectiveness and economy of administration. The number of school officials would be greatly reduced, and hence there would be less liability to loss of funds through incompetency or dishonesty. In Iowa 27,000 school officers are serving as members of school boards. The secretaries and treasurers receive $135,000, annually, as compensation for their services. In Minnesota the township system would reduce the number of school officers from 18,000 to 3000. In Wisconsin, it is estimated that the sum of $190,000 is wasted annually upon unnecessary schools. Under the district system, there is a great waste of supplies in one school, and a want of the same in another; buildings are allowed to become dilapidated for want of attention; several school officials are paid, when one officer would suffice. In these respects the township system would effect a saving of thousands of dollars annually. It is simply applying business principles to the business affairs of the schools.

2. Effectiveness and simplicity of organization. The township board of education, a certain proportion going out of office every year, should be armed with the same powers and exercise the same duties as the board of education in the city or in the independent district. They should appoint teachers,

locate buildings, select text-books, determine courses of study, designate what schools pupils may attend, consolidate schools when their numbers are reduced to a certain extent, and in fact transact any business which may lawfully come before them. Subdistrict lines would disappear and a most fruitful cause of trouble cease at once. In unity there is strength. To place all the schools of a township under the control of one governing board would tend to equalize length of terms, strengthen the teacher's position, and lift the schools to a higher place in the estimation of the public.

3. The township system affords the only means through which we may hope to reach township high schools and township supervision. We believe these two points are essential in any system looking to the improvement of the ungraded schools. The township high school has become a necessity, if we are to lift the rural school out of the rut into which it has fallen. To promote the highest efficiency of such a school, it must be in complete and perfect harmony with the schools of the township. This cannot be the case unless they are all under the control of one board, and supported from the same general funds. The establishment of these high schools would furnish a needed incitement to the pupils in the lower grades in the country, and would stimulate them to remain longer in school that they might graduate at the end of the course. It would dissipate the aimlessness of study and instruction so prevalent in the country schools of to-day. The answer to the question, is it possible to arrange the course so as to lead up to the establishment of the township high school, is invariably in the affirmative. Township supervision is a natural result of the township system. It has already become an established feature of the Massachusetts system. It is rapidly gaining ground in Ohio under the Workman law. It is the objective point at which the board of education is aiming in New Jersey, and other States are developing the idea of either township or of some other form of close supervision in connection with the ungraded schools.

The establishment of the township high school would tend to strengthen the county superintendency. These schools would afford better facilities for the academic instruction of teachers. They could be utilized as centers of normal instruction. The township superintendent would naturally become the ally of the county superintendent in conducting educational meetings, in grading the schools, and in fostering a healthy public opinion in favor of good schools, competent teachers, and liberal salaries.

4. The adoption of the township system equalizes the burdens of taxation, and renders it possible to distribute State school funds in inverse ratio with the wealth of the towns. If the towns of the State have a valuation upon a common basis, then it is just that, to a certain extent, those lowest in the scale should receive the greatest aid from State funds, in order that every community may be sure of good schools. This is the Massachusetts plan. In some States, notably in Massachusetts, New Jersey, and Rhode Island, a fixed sum is set aside for every school before any general distribution is made. The method of determining the exact amount thus placed to the credit of each school may be different in different States, but we believe the underlying principle to be correct, that public policy demands that the strong shall help bear the burdens of the weak. The remainder of State or county funds should be distributed to each township in a ratio based upon the actual attendance of pupils as shown by the record of the preceding year, with a possible discrimination in favor of those towns most willing to impose school taxes upon themselves.

There is not time to discuss other points. Under the Workman law in Ohio, many of the benefits of the township system may be obtained without abolishing subdistrict lines. Under the Boxwell law in the same State, the tuition of graduates from ungraded schools may be paid by the township board in the high school of any neighboring city or village of the county. Such a provision in the law is practically introducing the county high school, and in many States would be a most desirable feature. In Massachusetts, New Hampshire, and other States, township boards are authorized to pay out of public funds for the transportation of pupils to such schools as it seems best for them to attend. Thus they are enabled in small towns to bring all the children to a central school, or to unite two or more small schools, lessening the expense, and at the same time improving the educational advantages of the township. These points with many others are all germane to our general subject, but there is not time to discuss them in this connection. It must suffice to say that we can reach no other conclusion than this: The substitution of the township for the district, as the unit of organization, is absolutely essential to the highest good of the ungraded schools.

SUPPLY OF TEACHERS

The great question of the supply of competent teachers for the ungraded schools remains to be discussed. Of every 100 pupils enrolled in the public schools, Texas reports that 80 are in the ungraded schools; Indiana, 65; Illinois, 42; New Jersey, 25; Minnesota, 40; Ohio, 50; Wisconsin, 58; Florida, 90; Massachusetts reports only 10; California reports no ungraded schools, but 40 per cent. of the pupils are in schools of one or two rooms. These figures at best are only approximate, but they are enough to show the magnitude of the question under discussion. Undoubtedly the number of pupils enrolled in ungraded schools will reach nearly, if not quite, 50 per cent. of the entire enrollment. If we include schools of two or three rooms having practically no supervision, and which are but partially graded, the per cent. would be much higher. It is very difficult to gather statistics which show the number of teachers in the ungraded schools, having anything like an adequate preparation for their work. When we take into consideration the fact that the very large percentage of graduates of our normal schools is absorbed by the schools in the cities and larger villages, and that usually the bright teachers, who have had the benefit of a partial course in the normal school, work their way into graded schools as fast as possible, it is evident that the schools in the country are mainly left to the care of novices without any special training.

The school age, the manner of gathering statistics, the numbers of months in the school year, vary so much in the different States that it is impossible to arrive at anything but general conclusions. In the number of trained teachers employed in the different States there is a wide margin. Virginia and Kentucky report only 10 of every 100 teachers as having anything like an adequate preparation for their work. Texas and Nebraska report only a very few. In some parts of California 70 per cent. have professional training, in others as low as 10 per cent.

Rhode Island—About 10 per cent. with only a common-school education, 40 per cent. normal trained teachers, and the remainder having either a high-school or an academic training.

Missouri—About 25 per cent. of the teachers in ungraded schools are really prepared to teach.

Minnesota—About 19 per cent. of the teachers in our common-school districts have attended normal school.

Michigan—About 20 or 25 per cent. of the teachers of the schools have had some normal training.

Wisconsin—About 50 per cent. of the teachers are really prepared for their work; 2644 of them claim no higher preparation than that obtained in the common schools.

Indiana—About 15 to 25 per cent. of our teachers in the ungraded schools have had an adequate preparation for their work.

It is not necessary to follow these statistics. They are taken from different sections of the country, and are sufficient to indicate conditions in the rural schools. What is a fairly adequate preparation for the work in these schools? When we consider the low salaries paid, the short term of continuance in the work, not much if any over three years, it is evident that we cannot require a high standard of scholarship, nor four years' attendance at a preparatory school. A reasonable preparation ought to embrace these three particulars:

1. A thorough acquaintance with the elementary branches. This would include a discussion of the educational values of these branches both as sources of knowledge and of discipline; what studies should be introduced as best calculated to benefit the children in the mining districts, in the farming districts; and other questions as incidental to the formation of courses of study, which should be sufficiently elastic to suit conditions in different sections of the same State. But these all yield preference to the thought that whatever the teacher attempts to teach, that she herself must know.

2. A practical knowledge of the best methods of teaching, of school management, and an elementary knowledge of the principles of education.

3. More or less practice in actual school work under a skilled trainer. This preparation would touch the three points in which the country school teacher is weakest.

These are the minimum of requirements and can possibly be compassed in a two years' course, provided the entrance examination is rigid in the fundamental branches. Here we are confronted with the fact that no State provides means sufficient to give to the teachers advantages for obtaining this special preparation. Massachusetts, with 6 normal schools, and with 4 additional schools in course of erection, comes the nearest to it. Pennsylvania has 13 normal schools, each well equipped, but she has an army of 26,000 teachers. New York, with 11 normal schools, and a large number of training classes, is yet very far from being able to place a trained teacher in every schoolroom in the State. To put Iowa on an equal footing with Massachusetts would require the establishment of 25 normals. While the erection in any State of high-grade normal schools, as centers of influence and enlightenment, with courses of instruction covering three or four years, is exceedingly desirable, it is evident that the solution of the problem does not lie in that direction.

There are four courses open to us:

1. The improvement of the county institute. This is not

the place to discuss the institute system except as regards a few particulars in which it touches closely the preparation of teachers for rural schools.

It will not do to turn the institute into a school for academic work, the aim being to enable the teachers to pass the examination. The tendency in this direction is altogether bad. The spirit in which the institute was founded, calculated to create and foster a professional enthusiasm among teachers, and an educational enthusiasm in the entire community, should not be overlooked. It is a very essential feature in the system. In the Western and Southern States, where for a time we must depend upon the institute to aid us in preparing country teachers for their work, there is one point which must be insisted upon. The instructors must be persons who know what good teaching is. They must be men and women who have had a professional training, and who have made a study of the conditions and wants of the schools in which the teachers in the institute are to instruct. Every exercise should be full of professional spirit, and every recitation should be a model recitation. It happens many times that the institute is the only opportunity given the teachers to learn, by actual experience, in what a good school consists. This one point being carefully guarded, the institute may be left to take such form and shape as the conditions of the community may determine. A dead uniformity in institute work, even in the same State, is to be dreaded.

2. A system of summer or training schools, under the care and direction of State authority. Minnesota is making this experiment with assured success. A school of six weeks' duration, if rightly conducted, gives the teacher an opportunity to review under a competent instructor branches in which she is deficient. It is a new era in the life of many country teachers to come under the influence of a scholarly and cultured person, if only for a few weeks. Even this minimum of training thus secured cannot but be productive of good to the schools.

3. The State should avail itself of existing educational insti-

tutions. It is a fact which everyone acquainted with educational progress in the Western States must have observed, that those colleges in which sound scholarship is the basis of work have produced a marked effect upon the schools in the surrounding region. We ought to make use of the preparatory departments of these colleges in fitting teachers. There are in Iowa several private normals which carry a two years' course only, and which, by arrangements with school officials, control the work in the public schools so as to afford the necessary practice in school work. Why should not the State give them material encouragement, if they conform their course of study to the requirements of the State department of instruction and open their work to State inspection? New York, with her system of training schools, claims to be making progress in the direction of preparing teachers for the ungraded schools. These classes are supported by the State, but the amount received depends upon the character of the work done as tested by the final examination. Although New York has exceptional facilities for this work in a large number of old and well-established academies, there are some features of the plan which are worth consideration in other States.

4. The establishment of small normal schools at moderate expense, as fast as possible, in different places in the State. Care must be taken that such schools do not take on the name of college or ape the airs of the university, and that the course of study does not become top-heavy. They must be kept down to the specific work of fitting the country teacher for her work in the country school.

The objective point to be aimed at in each of these plans is to bring at least a modicum of professional training to the doors of the teachers in the ungraded schools. When this is done we can shut the schoolroom door in the face of the untrained teacher.

The committee reach these conclusions:

1. The proper unit of taxation is in no case the district. It should be either the township or the county, as the civil organization of the State may determine.

2. Every community should be required to raise a certain sum for the support of their schools as prerequisite for receiving their share of public money. A certain definite sum should be appropriated to each school out of the State funds, and the remainder should be divided *pro rata*, in accordance with the actual attendance as shown by the certified records of the preceding year, with a discrimination in favor of townships most willing to tax themselves for school purposes.

3. The unit of organization should be the township, unless, as in some of the newer States, the civil unit may render the county preferable. In no case should it be the district.

4. The weakness of the rural schools is in the want of skilled teaching, therefore it is the duty, as it is for the interest, of the State to foster and encourage all available means of bringing normal instruction to the doors of the teachers, with a view of rendering it feasible to require some degree of special preparation for the work from every candidate who aspires to the position of teacher in the ungraded schools.

Committee on State School Systems

Henry Sabin, Des Moines, Ia., *Chairman.*
James H. Canfield, Lincoln, Neb.
John W. Dickinson, Newtonville, Mass.
J. R. Preston, Jackson, Miss.
N. C. Schaeffer, Harrisburg, Pa.

VI

REVIEWS

NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

The reader of Scripture's *Thinking, feeling, doing*, closes the book with a feeling of sorrow rather than of anger—sorrow that at any American college there is a teacher whose shallowness and utter lack of scientific training are such as to disfigure a book that might have been made an interesting and satisfactory introduction to experimental psychology for popular use. But the author's flings at learning of every kind that cannot be "measured," and his manifest ignorance of much that is necessary for the equipment of a scientist in any branch of modern knowledge, make his book worse than useless, attractive as some of its features are. A course of reading in Darwin, Huxley, Tyndall, Clerk Maxwell, Helmholtz, Du Bois-Reymond, and others, with a view to learning what scientific method is and what the scientific attitude involves, is earnestly recommended to him, and in no carping spirit (Meadville, Pa., The Chautauqua Press. Flood & Vincent, 1895. 304 p. $1.50).——The handsomest and most legible German type that has yet been cast is that used in the three admirable little reading-books—Stifter's *Das Heidedorf*, Seidel's *Die Monate*, and Seidel's *Der Lindenbaum* (New York: American Book Co., 1895. 25 cents each).——*Doctrine and life* is the title of a series of studies of some of the principal truths of the Christian religion in their relation to Christian experience, by Professor George B. Stevens of Yale (Boston: Silver, Burdett & Co., 1895, 246 p. $1.25).——A distinct service has been rendered to the literature of political science, and an unexcelled text-book for college students made available, by the reprint, in cheap and convenient form, from the late Professor T. H. Green's collected works, of his *Lectures on the principles of political obligation.* The high philosophical morality and the sterling scholarship that pervade these lectures cannot be made too familiar to American students (New York:

Longmans, Green & Co., 1895, 252 p. $1.75).——The admirably edited *Selections from Newman*, by Mr. L. E. Gates of Harvard University, provide a striking addition to the texts available for the study of literature in school and college (New York: Henry Holt & Co., 1895, 228 p. 90 cents).——Cicero's oration *Pro Cluentio* is hardly ever read by American schoolboys, although, as is well known, the great historian Niebuhr regarded it as the best possible study for those who wish to perfect themselves in the art of expression, as well as to gain an adequate knowledge of Cicero's oratorical style. A new and scholarly edition of this oration by Professor Peterson of University College, Dundee, may serve to attract attention to it anew (New York: Macmillan & Co., 1895, 175 p. $1.50).——A foreign book on chemistry of great importance is *Analytical chemistry* by Professor Menschutkin of St. Petersburg, of which an English translation by James Locke has just been issued (New York: Macmillan & Co., 1895, 512 p. $4.00).——A second series of *Biological lectures*, delivered at the marine laboratory at Wood's Holl during the summer of 1894, is now available for students and general readers (Boston: Ginn & Co., 1895, 287 p. $2.00).——Professor Mace of Syracuse University has provided in his *Working manual of American history* a capital book for intelligent teachers of that subject (Syracuse, N. Y.: C. W. Bardeen, 1895, 297 p. $1.25).——From the same publishing house comes a very complete and carefully classified *Outlines of psychology*, by Henry G. Williams, superintendent of schools at Lynchburg, O. (Syracuse, N. Y: C. W. Bardeen, 1895, 148 p. $1.00).

VII

EDITORIAL

Hereafter the REVIEW will publish, at stated intervals, a succinct and accurate summary of the contents of the leading educational periodicals in Europe. This summary will be contributed by Dr. F. Louis Soldan, principal of the High and Normal Schools, St. Louis, Mo.

The Denver meeting of the National Educational Association has come and gone, and all the high hopes and pleasant anticipations concerning it were far more than realized. It proved to be one of the greatest meetings ever held on this continent, perhaps the very greatest. Its greatness consisted not alone in the large attendance, although this was unprecedented; but in its high plane, its broadly representative character, its cordiality of feeling, and the permanent stimulus that it gave to the scientific study of education and its problems. A veteran, who has been honored in years past with the presidency, called attention more than once to the great contrast between the Madison meeting of 1884, or the Chicago meeting of 1887, and that at Denver; remarking enthusiastically that the number and character of those present, the ability and elevation of the papers and discussions, and the whole tone of the meeting, proved conclusively that in ten years the Association has moved steadily forward and upward until now it is one of the really great intellectual and moral forces of the country.

The attendance exceeded somewhat the estimates published before the meeting, but did not vary materially from the predictions made by the executive officers on the basis of the managers' reports. The total number of persons who visited Denver on account of the meeting was about 15,500; the railroads, with their various means of counting accurately the number of excursionists, made this figure public. Up to July 17, when the executive officers left for home, Treasurer McNeill had recorded the names and collected the fees, or coupons, of 11,240 members. Probably enough more will be added to bring the grand total up to nearly 12,000. Illinois led with an attendance of 1495; but Colorado (1080), Missouri (1113), Iowa (1086), and Kansas (1171), were not far behind, each of the four contributing over 1000 to the total. New York did extraordinarily well (520), and smaller States like Louisiana, New Jersey, Rhode Island, and Delaware exceeded all expectations. The vast crowd was met, disposed of, and cared for in a truly admirable manner; for in completeness and efficiency the local arrangements excelled even those at Toronto. How much of this is due to Superintendent Gove may readily be guessed, but the devotion and ability of his numerous coadjutors and assistants would have made even a poor plan work well.

The meetings of the general Association were, without exception, crowded to the doors. On Tuesday afternoon, when the addresses of welcome were delivered, it was reported that four thousand persons were in the hall and as many more in the streets adjoining. An overflow meeting was promptly organized, and Colonel Parker, President John W. Cook, Superintendent Marble, and President De Garmo were kind enough to deliver impromptu addresses to hundreds of enthusiastic teachers who could not force their way into the regular meeting. The crowd was so great that on Tuesday evening, Wednesday morning, and Wednesday evening other overflow meetings had to be provided.

Of the programme it is unnecessary to speak at any length. Three of the principal evening addresses are printed in this number of the REVIEW, and a fourth will appear next month. The papers on the coördination of studies by President De Garmo, Professor Jackman, and Professor C. A. McMurry were very attentively listened to and heartily applauded. In fact the reception accorded to the representatives of the younger school of educationists was markedly cordial, in the Association itself as well as in the Council and in the several Departments.

On Thursday morning Supervisor Martin's great paper lifted up the audience to a high plane, and nothing that followed lowered it in any way. Particularly noteworthy were the eloquent addresses by Professor Baldwin of Texas, Dr. Bartholomew of Kentucky, and Superintendent Preston of Mississippi, on the subject of good citizenship and in opposition to sectionalism of thought or deed. On no other platform in America could such inspiring and patriotic addresses by Southern men have been heard, and by no other audience would they have been so heartily and sympathetically received. Professor Baldwin himself remarked, after the session was over, that each year as he attended these meetings he found the lines between States and sections growing dimmer, and a marked increase in the depth and strength of the feeling that the teachers are banded together in behalf of the interests of a common country whose several sections are but memories.

The newspapers of Denver reported the meetings with great fullness and with unusual accuracy. The only exception was when one imaginative scribe endeavored to manufacture the "politics" that he was unable to find, and produced an article that was very unfair to Mr. Gove, Mr. Cook, and Mr. Dougherty, and very distasteful to them all. But members of the Association were not deceived for a moment, and the offense was not repeated. As a matter of fact, "politics" was as absolutely lacking at Denver as it was at Asbury Park, and it is hoped and believed that it will never trouble the Association again.

Absolute unity of feeling existed regarding the election of executive officers, and the following were unanimously agreed upon by the committee on nominations and elected by the Association without a dissenting voice:

President: Newton C. Dougherty, Peoria, Ill.
Secretary: Irwin Shepard, Winona, Minn.
Treasurer: Israel C. McNeill, Kansas City, Mo.

Vice Presidents: 1st, Nicholas Murray Butler, New York, N. Y.; 2d, Mrs. A. J. Peavey, Denver, Colo.; 3d, W. H. Bartholomew, Louisville, Ky.; 4th, N. C. Schaeffer, Harrisburg, Pa.; 5th, W. N. Sheats, Tallahassee, Fla.; 6th, Henry Sabin, Des Moines, Ia.; 7th, E. B. McElroy, Eugene, Ore.; 8th, C. G. Pearse, Beatrice, Neb.; 9th, Henry R. Pattengill, Lansing, Mich.; 10th, R. H. Halsey, Oshkosh, Wis.; 11th, T. B. Lewis, Ogden, Utah; 12th, Estelle Reel, Cheyenne, Wyo.

Directors: Alabama, F. M. Roof, Birmingham; Arizona, T. D. Comstock, Tucson; Arkansas, Junius Jordan, Little Rock; California, Earl Barnes, Stanford University; Colorado, J. H. Van Sickle, Denver; Connecticut, George B. Hurd, New Haven; Delaware, A. N. Raub, Newark; District of Columbia, Z. Richards, Washington; Florida, Oscar Clute, Lake City; Georgia, Otis Ashmore, Savannah; Idaho, F. B. Gault, Moscow; Illinois, John W. Cook, Normal; Indiana, D. K. Goss, Indianapolis; Iowa, F. B. Cooper, Des Moines; Kansas, John McDonald, Topeka; Kentucky, James McGinness, Owensboro; Louisiana, Warren Easton, New Orleans; Maine,

M. C. Fernald, Dover; Maryland, E. B. Prettyman, Baltimore; Massachusetts, Ray Greene Huling, Cambridge; Michigan, S. E. Whitney, Detroit; Minnesota, C. B. Gilbert, St. Paul; Mississippi, R. B. Fulton, University; Missouri, John R. Kirk, Jefferson City; Montana, John M. Hamilton, Missoula; Nebraska, W. H. Skinner, Nebraska City; Nevada, J. E. Stubbs, Reno; New Hampshire, C. C. Rounds, Plymouth; New Mexico, Charles E. Hodgin, Albuquerque; New York, Charles R. Skinner, Albany; New Jersey, J. M. Ralston, Asbury Park; North Carolina, Bennett Smedes, Raleigh; North Dakota, L. B. Avery, Mayville; Ohio, W. J. White, Dayton; Oklahoma, D. R. Boyd, Norman; Oregon, J. H. Akerman, Portland; Pennsylvania, Charles De Garmo, Swarthmore; Rhode Island, Horace S. Tarbell, Providence; South Carolina, D. B. Johnson, Columbia; South Dakota, George M. Smith, Vermilion; Tennessee, Frank Goodman, Nashville; Texas, H. C. Pritchett, Huntsville; Utah, W. R. Malone, Salt Lake; Vermont, Alfred Turner, Rutland; Virginia, E. C. Glass, Lynchburg; Washington, F. J. Barnard, Seattle; West Virginia, Robert A. Armstrong, Morgantown; Wisconsin, D. D. Mayne, Janesville; Wyoming, A. L. Putnam, Newcastle.

The unanimous selection of Mr. Dougherty for the presidency was a splendid tribute to his ability and character, as well as to his long service in the Association. His administration is sure to be a successful one, and will in every way tend to the elevation and advancement of the Association's work. The reelection of Dr. Shepard for a fourth year of service as secretary simply reflected the absolute feeling of satisfaction with his services that exists. His post is very laborious and makes unremitting demands upon the time and patience of the incumbent. By his conscientiousness, ability, and devotion Dr. Shepard has placed the Association under lasting obligations to him, and the two presidents with whom he has already served are his personal debtors.

Mr. McNeill, who becomes treasurer in succession to Mr. Greenwood, is widely known in the Association, and brings to his new duties most unusual qualifications. It is due to him alone that the railroad arrangements for the Denver meeting were not only the best ever made, but almost perfection itself. In his hands the financial administration will be careful and businesslike, and in the Executive Committee his sound judgment will be invaluable.

The vacancy on the Board of Trustees caused by the expiration of the term of Dr. E. C. Hewett of Bloomington, Ill., was filled by the election of Superintendent A. G. Lane of Chicago, whose experience as an executive officer of the Association made him the best possible choice.

A very important and long-desired step was taken by the Association in the amendment of the constitution so as to provide for a voting membership composed exclusively of teachers and persons connected with educational work. This was accomplished by making a list of active members, to be composed at first of all persons who have been members for any two years in the past. Payment of the annual fee of two dollars is necessary to retain active membership, whether present at the meeting each year or not. New active members must be proposed by two members and pay an enrollment fee of two dollars in addition to the annual dues. All others who attend the meetings and pay the fee of two dollars are to be associate members. Their names will not be printed in the volume of *Proceedings*. By this action the Association provides itself with a dignified membership and an easily ascertained voting body. The situation presented to President Canfield at St. Paul in 1890 need never be repeated under the new rule.

Other amendments that increase the efficiency of the Association's business organization are those that abolish life directorships and life memberships, reduce the size of the Board of Directors, and make the Executive Committee constitutional officers. The Board of Directors also passed an important order relating to the details of the duties of the treasurer, and added departments of physical training, science teaching, and school administration to those already existing. It is worth while noting that every proposition laid before the Association itself or before either Board of Directors was carried by unanimous vote, with one exception; in the old Board of Directors eleven votes were cast against the proposition to establish a department of physical education. Of course, in voting for the place of meeting in 1896 each director expressed his personal preference. On the first ballot, when each director named his first, second, and third choice, Duluth had a total of 26, Asbury Park 22, and Los Angeles 20. On the second ballot only the first choice was expressed, and the result was: Los Angeles 12, Duluth 9, Asbury Park 7. The whole matter was then referred, as usual, to the Executive Committee, with full power to select the next place of meeting.

The important report on the rural school problem, which is printed in full in this issue of the REVIEW, made so strong an impression upon the National Council of Education that the following resolutions were passsed by that body:

> RESOLVED, That there be undertaken, under the auspices of the Council, an investigation of the subject of rural schools, embracing such topics as revenues and expenditures, the constitution, organization, and duties of boards of management and control, and the provision of suitable teachers. More definitely said investigation shall be conducted in general on the lines laid down in the report of the committee on State school systems submitted to the Council at its present session.
>
> RESOLVED, That a committee of nine be appointed to conduct this investigation, said committee to consist of the following persons: Henry Sabin of Iowa; D. L. Kiehle of Minnesota; A. B. Poland of New Jersey; C. C. Rounds of New Hampshire; J. H. Phillips of Alabama; B. A. Hinsdale of Michigan; S. T. Black of California; W. S. Sutton of Texas; and L. E. Wolfe of Missouri.
>
> RESOLVED, That the board of directors of the National Educational Association be urgently requested to appropriate, at some session to be held during the course of the present annual meeting, the sum of $2500, or such part thereof as may be necessary, to defray the expenses of this investigation, including the publication of the report of the committee.
>
> RESOLVED, That the committee shall report within the period of two years in such form as it may determine, and that it be authorized to publish its report.

Subsequently the membership of the committee was increased from nine to twelve, and the names of Charles R. Skinner of New York, Lawton B. Evans of Georgia, and William T. Harris of Washington, D. C., were added to those given in the above resolutions.

When the action of the Council was formally laid before the Board of Directors, the latter body unanimously adopted the following resolutions, which were introduced by the first vice president of the N. E. A.:

> RESOLVED, That the board of trustees be authorized to place in the emergency fund the sum of $2500, should such sum remain after all expenses incurred by the National Educational Association in connection with the meeting at Denver, in 1895, have been met.
>
> RESOLVED, That, should the emergency fund permit, the board of trustees are hereby authorized to audit and pay bills presented over the signature of the chairman of the special committee of twelve on rural schools appointed by the National Council of Education at Denver, July, 9, 1895, for the purpose of investigating problems connected with the rural schools of the country, their financial support, the organization of boards of management, the provision of teachers, etc.
>
> PROVIDED, That the total bills for this purpose shall not exceed the sum of $2500, not more than $1500 of which shall be drawn during the year 1895-96; and also PROVIDED that all such bills be for expenses actually

incurred with the approval of the chairman, and that no portion of the fund be drawn upon for compensation to any member of the committee or any officer thereof. PROVIDED, further, that the sum of $2500 may be drawn upon, if necessary—and if it is found sufficient—to defray the expense, in whole or in part, of the publication of the report of said committee, the method and manner of publication to be subject to the approval of the president of the National Educational Association.

By this action the N. E. A. not only continues the policy entered upon at Saratoga in 1892, but it formally directs the attention of the country to the great problem of the ungraded rural school, than which no other is more important to the great mass of the population to be found outside of the cities and towns. The committee is a very competent one, and with Mr. Sabin at its head results of lasting importance are sure to be accomplished. Of the twelve members Dr. Harris served both on the Committee of Ten on secondary school studies and on the Committee of Fifteen on elementary education. Dr. Poland of New Jersey was also a member of the latter committee.

Another very useful work is to be undertaken jointly by the Departments of secondary and higher education at the instance of Dr. Nightingale of Chicago. A committee is to be designated which will first ascertain and tabulate the facts concerning the various plans now in vogue concerning the admission of pupils to college. They will then proceed (1) to compare these plans and consult as to the most just and practicable ones; (2) to ascertain whether the rigid system of a special examination of pupils who have come specifically prepared for a given college cannot be superseded by something which will increase the college spirit in the secondary schools, and at the same time enhance the interests of higher education; (3) to bring, in fine, the secondary schools and colleges closer together, so that one shall lead directly to the other.

To make this work really effective the co-operation of the large Eastern colleges must be secured. Unfortunately they have dealt in the past so largely with candidates for admission prepared in private classes or in private fitting-schools, that they are out of all touch with the public high schools of the country and have little or no real knowledge of the problem that is to be solved. But if constant dropping will wear away a stone, constant iteration ought, after a while, to set in motion even a college faculty.

Another extremely important step was taken at Denver in the organization of a society, national in extent, for the scientific study of teaching. This society is an outgrowth of the Herbart Club which has existed for several years, and is to bear the name of Herbart—The Herbart Society, for the scientific study of teaching. The name indicates a desire to honor the memory and influence of one of the great masters of educational theory; but, in order that the society may not appear to be narrow and partisan, it has adopted as its motto, the Horatian line,

> Nullius addictus jurare in verba magistri.

Its investigations and publications, therefore, will be catholic and unbiased, although a number of the new society's executive council are strong believers in certain phrases of Herbartian doctrine and are actively engaged in making them known to teachers in the United States.

An executive council of nine members will direct the Society's work. They are as follows:

CHARLES DE GARMO, President of Swarthmore College, Swarthmore, Pa., *President*.

NICHOLAS MURRAY BUTLER, Professor of Philosophy and Education, Columbia College, New York.

JOHN DEWEY, Head Professor of Philosophy, University of Chicago, Chicago, Ill.

ELMER E. BROWN, Professor of Pedagogy, University of California, Berkeley, Cal.

WILBUR S. JACKMAN, Professor of Natural Science, Cook Co. Normal School, Englewood, Ill.

CHARLES A. MCMURRY, State Normal University, Normal, Ill., *Secretary*.

FRANK M. MCMURRY, Professor of Pedagogy, University of Buffalo, Buffalo, N. Y.

C. C. VAN LIEW, State Normal University, Normal, Ill.

LEVI SEELEY, Professor of Philosophy and Pedagogy, State Normal School, Trenton, N. J.

The Society desires to draw into its membership all teachers and parents, students of education, who wish to keep abreast of the best and most modern thought on education, and who are willing to follow a sound scientific method, wherever it may lead, in the study of educational questions. The Society will publish a Year-Book, similar to that issued this year, about six or eight weeks before the annual meeting of the N. E. A., and the monographs in the Year-Book will be discussed at an open meeting of the Society to be held at the time and place of the meeting of the N. E. A. The Year-Book, and such other publications as may be issued, will be sent free to all members of the Society. Membership may be secured by forwarding an annual fee of one dollar to the secretary, at Normal, Ill.

A plan has been formulated by which local affiliated clubs may be formed by those wishing to study and discuss the Year-Book and other literature issued by the Society. When four or more members form a local club the membership fee is fixed at seventy-five cents for each person. Each club will designate the person who is to act for it in corresponding with the Society.

The First Year-Book was issued before the Denver meeting of the N. E. A., and its contents were discussed there before large and interested audiences. This volume contained four valuable papers: one on the most pressing problems concerning the elementary course of study, by President De Garmo; one on concentration, by Professor F. M. McMurry; one on the culture-epochs theory, by Dr. C. C. Van Liew; and one on a plan of concentration for the first two school years, by Mrs. Lida B. McMurry. Every progressive teacher should study these papers carefully. Dr. C. A. McMurry, Secretary of the Herbart Society, will furnish the Year-Book, for fifty cents a copy, on request.

The further continuance of the system of uniform entrance requirements in English, adopted last year by educational organizations representing the colleges and preparatory schools of the Middle, the New England, and the North Central States, is guaranteed by the action of the Second Annual Conference held in Boston in May, 1895, by representatives of the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the New England Association of Colleges and Preparatory Schools, the Conference of Teachers of English of the North Central States, and the New England Commission of Colleges. All that the Conference seems to have accomplished, however, is the choice of the books prescribed for reading and study for two additional years—a period too short to enable the public to have any definite idea of the principles underlying the system of selection. Two dangers already seem to threaten the results to be gained from the new organization for securing uniformity. First, the Conference has shown unnecessary timidity in failing to put on record more definite recommendations as to the character and amount of the work to be done in English in the secondary schools. At present it has merely formulated a scheme for uniform examination requirements. But, especially under the widely prevalent system of admission to college by certificate, it is not of half so much importance what candidates should be examined on, as how, in general and detail, they should spend their four years of high-school study—a matter only vaguely indicated by the uniform requirements. Second, the representation of the Conference is in danger of becoming merely local. Six members from New England, three from the Middle States, and one from the rest of the country, is an arrangement that omits altogether the South, where English has always been ardently studied and well taught, and is obviously unfair to the West, where new conditions have given rise to new and sound methods of instruction. A third point is also worth mentioning. Among the prescribed books are several by American authors, which, though legally out of copyright, are still clung to so tenaciously by the extravagant protests of their former owners as to restrict their publication to a single firm and any educational or literary treatment of them to a single editor—an absurd situation and one obviously unfortunate for both the schools and the public. Such books should be excluded from the lists, if necessary; better still, the Conference should explicitly state its desire that no non-legal embargo should be laid on the publishing and editing of any books on its list not still under copyright.

The new and preposterous bill regarding temperance teaching in the public schools, to which we referred in June,[1] was unfortunately signed by Governor Morton and became a law. It was passed unanimously by a legislature that has rarely been equaled in its subserviency to "bosses" and political managers. No Tammany Hall representative, no saloonkeeper, either voted or spoke against it. This fact alone ought to be conclusive as to the worthlessness of the law as a check upon the saloon. On the other hand its evil effects upon the schools and upon the cause of rational temperance itself were pointed out by State Superintendent Skinner and his associates, by the members of the Board of Regents, by such college presidents as Low of Columbia and Taylor of Vassar, by

[1] X : 103.

the heads of the normal schools, by the boards of education of New York and Brooklyn, and by lifelong temperance advocates like Bishop Doane of Albany and Dr. W. R. Huntington of New York. But all this opposition availed nothing against the plea of the Republican politicians from the rural districts that "it was time the party did something for the temperance vote." This silly and shallow plea finally made a law out of a bill that was conceived in fanaticism and passed in hypocrisy. Judged politically even, it is a colossal blunder, but judged from the standpoint of the schools it is a crime. At the University Convocation in June it was vigorously denounced by Chancellor Upson, and strong resolutions condemning it were introduced by Vice Chancellor Doane and enthusiastically carried. The State Teachers Association went even further and declared unremitting war upon the obnoxious measure in these strong resolutions, which were unanimously adopted.

> *Whereas*, The Legislature has placed upon the statute books a new law concerning the teaching of physiology, a law contrary to all principles of correct teaching, opposed to all school laws and customs, interfering, as it does, with the courses of study and with the details of school work; therefore,
>
> RESOLVED, That the New York State teachers denounce that law as an insult to the teachers of the State, and a menace to the principles of free school teaching.
>
> That a committee of fifteen be appointed by the president of this association, of which he shall be chairman, representing the following departments of school work: The college professors, the normal-school teachers, the Regents of the University of New York, the academic and grammar-school principals, the School Commissioners, the city and village superintendents and institute instructors, the duty of which committee shall be to organize and make all honorable efforts for the repeal of this vicious and obnoxious law.
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> That, as the provisions of this law call for the perfunctory teaching of the subject for ten weeks of the school year, we advise all teachers and trustees to follow the plan of teaching physiology heretofore pursued until the next Legislature shall have an opportunity to repeal the present law.
>
> That we advise the teachers and trustees, while awaiting the result of the efforts for repeal, to purchase no new text-books on physiology; and if such purchase becomes necessary at the beginning of the last ten weeks of the school session, we advise the purchase of those books only on which no royalty is paid for certain so-called indorsements.

The Legislature of New York passed another law, however, which, before the National Educational Association, Colonel Parker pronounced the most important and beneficent piece of legislation enacted by any State since the first State Normal School was established at Lexington, Mass. This law authorizes any city or village, employing a superintendent of schools, to establish and maintain a training school for teachers, and provides that the State shall contribute to the support of such school "one dollar for each week of instruction of each pupil." This provision would not in itself be so important, were it not for the clause which follows. This clause requires that, after January 1, 1895, all teachers appointed to primary or grammar grades, either shall have had successful experience in teaching for a period of not less than three years, or shall have graduated both from a high school and from a school for professional training. This requirement is so far-reaching and of so striking a character that it is presented in full:

> After January first, eighteen hundred and ninety-seven, no person shall be employed or licensed to teach in the primary and grammar schools of any city authorized by law to employ a superintendent of schools, who has not had successful experience in teaching for at least three years, or, in lieu thereof, has not completed a three years' course in, and graduated from a high school or academy having a course of study of not less than three years, approved by the State superintendent of public instruction, or from some institution of learning of equal or higher rank, approved by the same authority, and who, subsequently to such graduation, has not graduated from a school or class for the professional training of teachers, having a course of study of not less than thirty-eight weeks, approved by the State superintendent of public instruction. Nothing in this act shall be construed to restrict any board of education of any city from requiring such additional qualifications of teachers as said board may determine; nor shall the provisions of this act preclude the board of education of any city or village from accepting the diploma of any State normal and training school of the State of New York, or a State certificate obtained on examination, as an equivalent for the preparation in scholarship and professional training herein required.

This law does not merely provide that the teachers employed in the cities and villages of New York shall have at least a high-school education and a course in professional training; it does something more. It requires that the schools in which this high-school education and this course in professional training are obtained, shall have the approval of the State superintendent of public instruction. The duty of approving or disapproving high-school work and of approving or disapproving the professional training of teachers, lays upon the State superintendent an enormous responsibility and opens before him a great opportunity. If he is wise and firm in the performance of this duty, he can, with this power in his hands, make every high school in the State an efficient high school and every training school an efficient training school. No community maintaining a high school or a training school can afford to allow its schools to remain without the State superintendent's sanction, because without that sanction the graduates of its institutions are debarred from the teaching profession. If a school is weak in any particular, therefore, the State superintendent has only to withhold his approval until the weakness is remedied. The logic of the situation will thus compel the local authorities to make all necessary improvements. Will the present State superintendent of New York prove himself worthy of this vast power and this great opportunity? Those who know him best have not the slightest doubt that he will.

It behooves the friends of progress in the Empire State to have a watchful eye that the beneficent legislation which she has thus enacted shall not be repealed through the sinister efforts of those who would use the school system for political purposes. The opposition to the passage of the law was long and stubborn. It was brought forward seven years ago by the State council of superintendents, and to the persistence of that body and its committee on legislation is due the credit of its ultimate triumph. Twice before it was passed by the Legislature. On one of these occasions it was permitted to die by Governor Hill under circumstances that reflect greater credit on his powers of intrigue than on his honesty of purpose. On the other occasion it was vetoed by Governor Flower. In 1895 it was again passed by the Legislature and approved by Governor Morton, who, for so doing, deserves and has received the thanks of the teaching profession as represented by the National Educational Association. The very fact, however, that it has required exertions so strenuous and so long continued to secure the adoption of a beneficent measure, points to unceasing vigilance as the only means through which the law will retain its place on the statute book.

Nor should the friends of education in New York rest content with taking and maintaining this step, which places her in advance of all her sister commonwealths in educational legislation. Similar legislation should, as soon as possible, be enacted for the rural schools, and a law should be passed requiring that no one should be permitted to teach in a high school who had not graduated from a college of acknowledged standing and from a course of professional training specially adapted to secondary school work.

The success of the educational congresses and exhibits in connection with the great Cotton States and International Exposition at Atlanta, this autumn, is already assured. Ex-Governor Northen, who is the chief of the department of education, addressed the National Educational Association at Denver on the subject and aroused great interest in the project. As a result a strong representative committee of seventeen, with President Dougherty at its head, was appointed to represent the N. E. A. at Atlanta. Commissioner Harris, President Gilman, and others are actively co-operating with the Exposition management, and the result will be a programme to arrest the attention of the entire country. All who can should arrange to take part in this great demonstration, at the capital of the New South, of the educational progress and influence of the nation.

An Educational Press Association has been formed, having as its charter members the following journals:

American Teacher, Boston, Mass.; Colorado School Journal, Denver, Colo.; EDUCATIONAL REVIEW, New York, N. Y.; Education, Boston, Mass.; Iowa Normal Monthly, Dubuque, Iowa; Intelligence, Oak Park, Ill.; Michigan Moderator, Lansing, Mich.; New York School Journal, New York, N. Y.; New England Journal of Education, Boston, Mass.; Northwestern Journal of Education, Lincoln, Neb.; Ohio Educational Monthly, Columbus, O.; Primary Education, Boston, Mass.; Popular Educator, Boston, Mass.; Public School Journal, Bloomington, Ill.; Primary School, New York, N. Y.; Pennsylvania School Journal, Lancaster, Pa.; School Review, Hamilton, N. Y.; School Bulletin, Syracuse, N. Y.; School Board Journal, Milwaukee, Wis.; School Education, Minneapolis, Minn.; Teachers Institute, New York, N. Y.; Texas School Journal, Dallas, Texas; Western School Journal, Topeka, Kansas.

Other journals may be admitted by vote of a committee on membership, whose names are not to be known outside of the Association. It is provided that journals admitted to membership must contain original contributions, must have a recognized standing as valuable promoters of education, and have been in existence at least three years. A constitution and formal organization will probably be adopted during the session of the Department of Superintendence at Jacksonville, Fla., in February, 1896.

Dr. Harris is kind enough to permit the publication of the following passage from a private letter written to him by Rudolf Eucken, professor of philosophy at the University of Jena:

> "After having read with vivid interest the report of the Committee of Fifteen, and especially your part of that document, I feel impelled to express my gratitude to you personally, and send my deep-felt sympathy.
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> "My position with reference to the questions at issue is quite similar to yours, and especially do I share yonr view of Herbart; according to which he may doubtless be regarded a great pedagogue, but not a leader in philosophy. This is the conviction of most learned men in Germany. Herbart's metaphysics scarcely find a disciple among the younger generation. However, among teachers his pedagogy, owing to its systematic structure and careful elaboration, justly finds many disciples, but alas! these disciples are very apt to fall into the danger of adopting his dry and unspiritual view of the world, owing to the usefulness of his pedagogy. A good part of the strength of Herbartian pedagogy rests upon the fact that no other well elaborated system is placed in opposition to it.
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> "JENA, May 7, 1895."

In *Revue Pedagogique* for July, M. Gabriel Compayré publishes a long and very eulogistic analysis of the Report of the Committee of Fifteen.

It is a pleasure to call attention again to the excellence of the *Cook County Normal School Envelope*. Any superintendent or principal can secure for his teachers the personal help of Colonel Parker and his remarkable faculty by causing them to procure and study the *Envelope*. It deals with actual lesson-material, and represents the highest form of co-operative educational work.

The official edition of the Report of the Committee of Fifteen was issued in June by the American Book Company, acting as agents for the National Educational Association. It makes a handsome volume of nearly 250 pages, and is uniform in style with the Report of the Committee of Ten. The official edition alone contains the chairman's introduction and the large selection made from the numerous opinions furnished to the committee in response to their questions. The price is 30 cents, postpaid.

Dr. George P. Brown of Bloomington, Ill.—than whom no one is more competent—has issued an annotated edition of Dr. Harris's report on the correlation of studies. His scholarly notes greatly increase the value of the report as a subject for study and discussion by teachers in clubs and meetings. The price is only 20 cents a copy.

The Illinois Society for Child-study is the most competent body yet organized to deal with that subject. Of its admirable *Handbook* two numbers have been issued. They may be had from the secretary, Professor C. C. Van Liew, Normal, Ill.

The new School of Pedagogy of the University of Buffalo will open on September 23. Principal F. M. McMurry has every reason to feel proud of the consummation of his plans, and Buffalo will soon take rank as the most active educational center between New York and Chicago.

The geography of Colorado is certain to be well taught in thousands of schools this winter. By securing and studying the contents of the *Northwestern Journal of Education* for July, teachers may also fit themselves to deal adequately with the adjoining State of Nebraska. The editor secured for that issue an admirably written series of papers on Nebraska's resources.

Of the five executive officers of the N. E. A. for 1895–96, three are city superintendents, one is president of a State normal school, and one is a college professor. The Board of Directors is probably the strongest ever elected. It includes the State superintendents of New York, Missouri, Maryland, and Arkansas; four college presidents—De Garmo of Swarthmore, Fulton of Mississippi, Gault of Idaho, and Raub of Delaware; such normal-school men as Cook of Illinois, Pritchett of Texas, and Rounds of New Hampshire; a splendid representation of city superintendents, among whom are Gilbert of St. Paul, Goss of Indianapolis, Cooper of Des Moines, Ashmore of Savannah, Tarbell of Providence, Glass of Lynchburg, McGinniss of Owensboro, Van Sickle of Denver, and Ralston of Asbury Park; together with such thoroughgoing representatives of secondary and higher education as Huling of Massachusetts and Barnes of California. MacDonald of Kansas represents the editors.

EDUCATIONAL REVIEW

OCTOBER, 1895

I

EDUCATIONAL VALUES[1]

We estimate a man's worth by his intellectual grasp, his æsthetic and ethical insight, and his power for action toward right and useful ends. If these characteristics make the ideal man, they should be the ideal aim of education, and a study is to be valued as it best contributes toward developing them. The same test of efficiency is to be applied to the whole curriculum of a school period.

There is a correlation between the field of knowledge and the knowing being. The objective world, with its varied content, answers to the mind with its varied powers. It is through the objective world of nature and of man that the subject comes to a consciousness of himself. Each important phase of the objective world makes a distinct contribution in extent or kind of knowledge to that consciousness. We do not live in a world where cucumbers grow on trees, or where human beings fail in their ever-recurring characteristics; and I believe it possible to discover the kind of value which each source of knowledge may furnish toward the education of the child, with the expectation that we shall not find the choice of studies to be a matter of indifference.

Without laying claim to a best analysis I may use a customary division of the field of knowledge; (1) mathematical relations; (2) natural phenomena; (3) human action;

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[1] An Address delivered before the National Educational Association at Denver, Colo., July 12, 1895.

(4) human thought; (5) æsthetic and ethical qualities. The studies corresponding are (1) mathematics; (2) natural science; (3) history; (4) language and literature; (5) art and ethics. Mathematics treats of quantitative knowledge, furnishes a peculiar intellectual training, and makes possible all commerce, all great structures, and the higher developments of physical science. Natural science acquaints us with the field of physical phenomena and of plant and animal life, is the best training in induction, and is largely the basis of our material civilization. History reveals the individual and our present civilization, is the light of all human action, is a source of ethical training, and has high practical value for the problems of government and society. Literature reveals the ideal thoughts and the speculations of men, gives æsthetic and ethical culture, and in a practical way applies poetry to life. Art and ethics deal with distinct types of knowledge, cultivate the higher emotional powers and, like ideal literature, set up standards of perfection in execution and in conduct of life.

The world in which we live is the world we are to know in order to adapt ourselves to it in thought, the world we are to know in order to gain power to work therein with success, the world we are to know as representing the thought of the Creator and the correlated nature of man, the world we are to know to gain the soul's highest realization—and for these ends, to know in its various phases. Each department of study makes its own peculiar contributions to knowledge, each has its peculiar fitness for developing some given power of the mind, each makes its own contribution in preparing the individual for the practical world. In three distinct ways does each subject have a peculiar value—for knowledge, for power, for practical life.

While a classification of studies without cross-divisions is impossible, we may say that the first four groups give us the power of knowledge for action; the fifth the feeling for perfection of action and for rightness of action—and these in their exercise and their tendency create the right kind of power in action.

Can the exact absolute and relative value of each line of study be determined? No, but we may make approximate estimates through philosophical study of the relation of the mind to the world, through the history of education and the experience of practical teachers. Every position is tentative and subject to constant readjustment, with a closer approach to truth. A reinvestigation of many problems through careful observation of children will doubtless make an important contribution to knowledge of values, if the experiments are conducted with a wisdom that takes them out of the realm of fads, and if the Platos of the world are not given a seat too far back. Important as this kind of investigation is, extreme advocates may undervalue the store of educational philosophy that has become common property. From Cain and Abel down, the child has always been the observed of all observers; the adult man recognizes the nature of the child in his own nature, and has recollections of many of his first conscious experiences. From the time of the early philosophers, the data have been sufficient to discover universal truths. Child-study serves, not so much to establish principles, as to bring the teacher's mind in close sympathy with the life of the child, in order to observe carefully facts for the application of principles.

In an ideal course of general training, can there be, in any exact meaning, an equivalence of studies? As well ask whether one sense can do the work of another in revealing the world to the mind. To be sure, the fundamental conceptions of the material world can be obtained through the sense of touch alone; but we also attach importance to the revelations of sight and hearing, and these revelations have a different quality. He who lacks these other senses is defective in sources of soul-development. So he who neglects important fields of knowledge lacks something that is peculiar to them. Each study helps every other, and before special training begins each is to be used up to the time when the student becomes conscious of its meaning. By contact with nature and society, the child, before the school period, gets an all-around education. He distinguishes numerically, observes natural phenomena, notes the deeds of his fellows, gains the thoughts of others, and begins to perceive the qualities of beauty and right. The kindergarten promotes all lines of growth; the primary school continues them. Shall the secondary school be open to broad election? At a time when some educators of strong influence are proclaiming the formal theory of education, that power without reference to content is the aim of study, and some universities encourage a wide choice of equivalents in preparation for admission, and the homes yield to the solicitation of pupils to omit difficult subjects, it is important to answer the question in the light of the previous analysis. And I say No, for the simple reason that not until the secondary period can the meaning of the various departments of knowledge be brought within the conscious understanding; not until then are the various powers developed to a considerable degree of conscious strength; not until then has the natural bent of the student been fairly tested. In this period one would hardly advocate the exclusive study, for instance, of history to the entire neglect of mathematics and physics; nor would he advocate the choice of mathematics to the entire neglect of history and literature.

The question of college electives is to an extent an open one. But it is clear that when general education ends special education should begin, and that indiscriminate choice of studies without purpose is no substitute, either for a fixed curriculum or for group-election in a special line. I believe most fully in the freedom of modern university education, but not in its license. Its freedom gives the opportunity to choose special and fitting lines of work for a definite purpose; its license leads to evasion and dilettanteism. We hear of a senior who took for his electives Spanish, French, and lectures in music and art, not because they were strong courses in the line of his tastes and tendencies but because they were the lines of least resistance. There appears to be a reactionary tendency toward a more careful guarding of college electives, together with a shortening of the college course, in order that genuine university work may begin sooner. If this tendency prevails it will become possible to build all professional and other university courses upon a substantial foundation, and we shall no longer behold the disgraceful spectacle of law and medical students entering for a degree upon the basis of a grammar-school preparation.

The opportunity to specialize, which is the real value of college election, is necessary even for general education. To know all subjects one must know one subject. The deepening of one kind of knowledge deepens all knowledge. The strengthening of power in one direction strengthens the whole man. And education is not complete until one is fairly master of some one subject, which he may employ for enjoyment, for instruction, and for use in the world of practical activity. Here we reach the ultimate consideration, on the intellectual side, in estimating educational values.

"But," says someone, "my conservative, not to say old-fashioned friend, do you not know—etc.?" Yes, I know that we have before us new problems or a reconsideration of old problems, and I hope I am with the vanguard. I believe the trend of educational thought is right, however we may for a time deviate in curious paths. I know that mental capacity, health, time, money, home obligations, proposed occupation and even deviation from the normal type are all to be considered in planning the education of a pupil. But the deviations from ideal courses and standards should be made with ideals in view, a different proposition from denying the existence or possibility of ideals. Yes, I know that the mind is a unit-being and a self-activity, that it develops as a whole, that there are no entities called faculties. But suppose the various psychical activities had never been classified, as they now are, in accordance with the facts of consciousness, the usage of language and literature, and the convenience of psychology, what a herald of fresh progress would he be who would first present mental science in clear groupings. We may call the world one, but it has many phases; the mind is one, but it has many phases; these are more or less correlated, and our theory of educational values stands. Yes, I know that interest is the *sine qua non* of success in education, and nothing is more beneficent than the emphasis given this fact to-day. I also know that pleasure is not the only, not even the most valuable interest; and that the disagreeable character of a study is not always a criterion for its rejection. The pleasure theory will hardly overcome the importance of a symmetrical education.

In regard to some things, however, some of us must be permitted to move slowly. We must use the principle of apperception and interpret the new in the light of that which has for a long time been familiar; attach it to the apperception-mass; we must be indulged in our right to use the culture-epoch theory and advance by degrees from the barbaric stage to that of deeper insight; we must concentrate (concenter) with established doctrines, other doctrines that present large claims, and learn their correlations and co-ordinations.

A new object or idea must be related to and explained by the knowledge already in mind; it must be so placed and known, or it is not an idea for us. If apperception means the act of explaining a new idea by the whole conscious content of the child's mind, then it is the recognized process of all mental growth. In a given study topics must be arranged in logical order, facts must be so organized as to constitute a consistent whole, important relations with other studies must be noted, and one subject must be made to help another as opportunity arises. If correlation means to unite and make clear parts of subjects by discovery of valuable mutual relations, then it is a vital principle of all good teaching. Studies, while preserving their integrity, must be adjusted to each other in time and sequence, so that a harmonious result may be produced. If co-ordination means the harmonious adjustment of the independent functions of departments of study, I own the triteness of the truth.

If the theory of culture-epochs finds a parallel in order of development between race and individual, and throws light upon the selection of material for each stage of the child's growth, then let the theory be used for all it is worth. Its place, however, will be a subordinate one. Here are the world and the present civilization by means of which the child is to be educated, to which he is to be adjusted. Select subjects with reference to nature as known by modern science, with reference to modern civilization and the hereditary accumulation of power in the child to acquire modern conceptions.

If concentration means subordinating all other subjects of learning to a primary subject, as history or literature, which is to be used as a center throughout the elementary period, I refuse to give it a place as an important method in education. Intrinsically there is no such thing as a primary center except the child himself. He possesses native impulses that reach out toward the field of knowledge, and in every direction. It is difficult to imagine a child to be without varied interests. Did you ever see a boy who failed to enumerate his possessions, investigate the interior of his automatic toy, delight in imaginative tales, applaud mock heroic deeds, and appreciate beautiful objects and right action? If the child lacks normal development and has not the apperceiving mind for the various departments of knowledge, create new centers of apperception and interest, cultivate the neglected and stunted powers. The various distinct aspects of the objective world suggest the selection of studies; the nature of the mind suggests the manner in which the elements of knowledge are to be organized. The parts of a subject must be distinctly known before they are correlated; subjects must be distinctly known before they are viewed in a system of philosophy. Knowledge is not organized by artificial associations, but by observing the well-known laws of classification and reasoning. Moreover, all laws of thought demand that a subject be developed in a definite and continuous way, and that side illustration be employed only for the purpose of clearness. In practice the method of concentration can but violate this principle.

We may ask whether apperception, correlation, co-ordination, and concentration are anything but a recognition of the laws of association. The laws of association in memory are nothing but the law of acquisition of knowledge, as all good psychology points out. These laws include relations of time, place, likeness, analogy, difference, and cause. Add to these laws logical sequence in the development of a subject, and you have all the principles of the methods named. Have these investigations an important value? Yes. They explain and emphasize pedagogical truths that have been neglected. Having performed their mission, and having added to the progress of educational theory, they will give way to new investigations. This is the history of all progress.

The subject of interest deserves a further thought. It goes without saying that all a man thinks, feels, and does centers around his own personality, and in that sense is a self-interest. But we are not to infer that therefore interest must be pleasure. We are born with native impulses to action, impulses that reach out in benevolence and compassion for the good of others, impulses that reach out toward the truth and beauty and goodness of the world without regard to pleasure or reward. These impulses tend toward the perfection of our being, and the reward lies in that perfection, the possession of a strong and noble intellectual, æsthetic, and ethical character. The work of the teacher is to invite these better tendencies by presenting to them the proper objects for their exercise in the world of truth, beauty, and right. Interest and action will follow, and, later, the satisfaction that attends right development. Whenever this spontaneous interest does not appear and cannot be invited, the child should face the fact that some things must be, because they are required, and are for their good. When a course of action is obviously the best, and inclination does not lead the way, duty must come to the rescue.

I am not touching this matter as an old ethical controversy, but because I am convinced it is a vital practical problem of to-day in education; am convinced that the pleasure theory is bad philosophy, bad psychology, bad ethics, bad pedagogy, a caricature of man, contrary to our consciousness of the motives of even our ordinary useful acts, a theory that will make a generation of weaklings. Evolution does not claim to show that pleasure is always a criterion of useful action. Herbert Spencer in his *Ethics* says, "In many cases pleasures are not connected with actions which must be performed, nor pains with actions which must be avoided, but contrariwise." He postpones the complete coincidence of pleasure with ideal action to the era of perfect moralization. We await the evolutionist's millennium. Much harm as well as much good has been done in the name of Spencer by well-meaning teachers, and much harm has been done in the name of physiological psychologists; I would avoid a misuse of their noble contributions to educational insight. Listen to a view of physiological psychology with reference to the law of habit: "Do every day or two something for no other reason than that you would rather not do it. . . The man who has daily inured himself to habits of concentrated attention, energetic volition, and self-denial in unnecessary things, will stand like a tower when everything rocks around him and when his softer fellow-mortals are winnowed like chaff in the blast." The fact is, it is impossible to create character, energy, and success without effort that is often painful. This view is an essential part of my theory of educational values.

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II

THE ESSENTIALS OF A MODERN LIBERAL EDUCATION[1]

I beg permission to preface the main body of this address with two remarks, partly apologetic and partly explanatory. The subject brought before you this evening may seem to some quite lacking in that freshness of interest which promotes a flow of novel and entertaining thoughts. Only last February 20, in this city, an elaborate report from a number of experts was presented which dealt primarily with studies in elementary education. This report, however, suggested important modifications in that subsequent training of the smaller number which is traditionally esteemed worthy of being called a liberal education. And for some years past, not only in this country, but in France, in Germany, and even in conservative England, discussion has been rife over the order and the character of studies proper for collegiate and university students. In spite of writings and speeches innumerable, on the part of men and women most competent or very incompetent, it can scarcely be claimed by the non-partisan observer of this contention that agreement has been reached even upon the more important and fundamental of the numerous considerations involved. Yet how important it seems to us all to have some settlement of the contention! For the children of to-day will not meantime stop growing into young manhood and young womanhood; and the youth of to-day are constantly being converted into teachers of the generation following them.

The other remark which you will please consider as a part of my preface is the following: Education is one of those subjects, which, from their very nature, do not admit of a very close approach to demonstrative argument. Neither from history, nor from our knowledge of nature and of the human soul, nor from study of the details of experience in the past, can we construct a science—strictly speaking—of education. Pedagogics will probably never hold a place among the exact sciences. We may, however, form comprehensive and defensible opinions on this subject; and these opinions will be the more entitled to respect and acceptance, as the mind holding them is itself genial and truly liberal, and is also acquainted with the truths of history, of nature, and especially of the human soul. I close this remark, then, by saying that, without pretense of drawing irresistible conclusions, much less of infallibility in argument, I merely offer for your friendly consideration some of my opinions.

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[1] An address delivered before the Association of the Alumni of Western Reserve University, Cleveland, O., June 18, 1895.

But first of all let us see clearly just what the question before us really is. For I cannot help thinking that, while the spirit in which it is debated and the inducements brought forward are often much too narrow, the question itself is rarely defined with sufficient limitation. As to the very meaning of the question, then, I offer these three statements:

It is a liberal education the nature of which we are briefly to discuss. Now this term necessarily implies some sort of differentiation. Freeing it, as far as possible, from all false pride and also from jealousy and unreasoning opprobrium, the term must be held to signify something more than *mere* education. It must signify—let us frankly confess—education for the few as distinguished from education for the great multitude, or for the very many. The public schools, then, however supplemented by private generosity, cannot reasonably be expected to provide the body of the people with a liberal education. I wish this declaration, however, to be considered as different from the important and closely connected practical question: "What part should the public schools take in starting a few selected pupils on their way to a truly liberal education?"

Neither is a liberal education properly a technical education such as our manual-training and trades-schools, our business colleges, and even most of our so-called scientific schools, aim to give. This may be admitted without in the least depreciating the character of the training given by these schools, or the value of the results which many of them produce. But if we mean anything distinctive by the words, "a liberal education," it is something more than such an education as these schools furnish.

We may now come closer to the meaning of the phrase by laying emphasis upon the word "liberal." Of course this word once meant, in this connection, such an education as befits a free man or a gentleman. On this account there is still clinging to our usage something of pride on the one hand, and of jealousy and odium on the other hand. For are not all men now equally free; and where is now the class of gentlemen, unique and distinctively so-called? By a justifiable turn of meaning, however, a "liberal education" may be defined as that which makes the free mind, which furnishes the liberalizing culture of the trained gentleman. And here it must be remembered that all specialists' studies have their peculiar prejudices and peculiar temptations—almost irresistible—to particular forms of narrowness. A truly liberal education ought therefore to tend toward the setting of the mind free from all classes of scholastic prejudices. It ought to work in the direction of freedom from the philologue's narrowness, from the "scientist's" narrowness, from the circle of such illiberality as distinguishes the mere student of economics, or of social problems, of psychology, or of theology.

But, again, I am to speak of the "essentials" of that education which is worthy to be called liberal. Now, amid wide disagreements as to what and how much the constitution of a liberal education involves, and as to the order and proportion in which its studies should be taken, there prevails the universal assumption that some things are entitled to be considered indispensable factors in this constitution. Important changes have undoubtedly taken place in opinion on almost all the subordinate points under discussion. The old-fashioned, substantial agreement as to what are essential subjects of instruction in this particular form or degree of education has been of late largely broken up. There is even more diversity of view as to how far subjects admitted to be essential should be carried before specialization in non-essentials is permitted or encouraged. Scarcely any two curricula in any of the institutions in this country, which design and claim to afford a truly liberal education, precisely agree. Yet, theoretically, all are agreed as to the validity of a distinction between essentials and non-essentials. And, practically, certain subjects are everywhere required, at least to some extent, in the earlier stages of this form of education.

Once more, let it be borne in mind that the very inquiry as to what a "modern" liberal education should be admits the propriety, and even the necessity, of making changes in many of the factors of such an education. And here I must insist upon a distinction which has been of late almost wholly overlooked in all discussions of this subject. This is the distinction between a truly modern education and the recent great extension of the elective system in the education offered by the higher institutions of this country. That kind of freedom, or "liberality" if you please, which gives to the youth under education the choice of his subjects of pursuit, and largely of the order and manner of their pursuit, has been carried among us to an extent which astonishes the European students of educational problems. But neither the exercise nor the withdrawal of this freedom in itself determines the question whether the student is receiving a genuinely modern education. What is necessarily implied in this word modern I shall try to make clear in another connection. I now wish only to say that the term signifies some kind of change which shall adapt the so-called liberal education to the age, but that the particular kind of change required is by no means necessarily to be reached through an elective system.

And now as I inquire, "What, then, are the essentials of a modern liberal education?" "What studies must be pursued in order to secure, as far as possible, the truly free and cultured mind in accordance with the actual conditions of modern life?" I find no insuperable difficulty in making up a fairly defensible opinion. For amid many and conflicting changes, all is by no means changed. History still lies back of us with its great lessons there, although we must undoubtedly take pains in reading them into clear and convincing formulas. The primary and essential facts and laws of man's environment—what we call nature, in which human nature has its setting, and in which human life develops with a certain reciprocity of influences—also remains the same as ever. And the soul of man, that which is to be educated; the real being whose culture to the point of highest freedom and perfection it is hoped by all changes in processes the better to attain; the soul of man is not essentially different in this boastful nineteenth century from the soul of man in the so-called "Dark Ages," or when Plato and Aristotle undertook its informing, purifying, and elevating.

From history, from nature without, and from the nature of the mind, I think we may confidently derive a body of rational conclusions as to what are the essentials of the most modern liberal education, or of all truly liberal education. And now, without making any show of argument, deductive or inductive, as though you could not avoid being convinced and agreeing with me, I will frankly state my own opinions and some of the reasons which, in my own reflections, support them.

A truly liberal education includes, I think, as essential to it, the prolonged and scholastic pursuit of three subjects, or groups of subjects. These three are language and literature, mathematics and natural science, and the soul of man, including the products of his reflective thinking. Any education which is markedly defective on any one of these three sides comes, so far, short of being liberal—of being, that is to say, the kind of culture which sets the mind most truly free, and which is worthy of the cultivated gentleman in the nobler meaning of that latter word.

It is difficult indeed to separate the scientific study of literature from the study of history, or to separate the proper pursuit of philosophy from the study of both literature and history. But in a qualified, though meaningful, way we may declare that the supreme expression of human mental life is in literature—of man's life, that is, of thought and feeling. To get the supreme expression of man in action, in the exercise of those activities which we somewhat loosely call practical, we must turn to the study of history. But literature is, of course, a certain form of human language, put on record so that the thoughts and feelings thus expressed can remain for other generations of thinking, feeling men to contemplate sympathetically and yet critically.

Language, then, is the only pass-key to literature; and to be a cultured student of language is the only possible way to possess the key which unlocks the treasure-house of literature. You will notice that I have used this important word in the singular number. I have not said that a liberal education includes of necessity the prolonged scholastic study of many languages, much less the glib-tongued use of many languages. It is undoubtedly a very convenient thing in these days to speak in several of the principal forms of human speech; it is even, if you please, a pretty accomplishment quite worth spending some years of time and some thousands of dollars upon. But it is not an essential, it is not even a very vital and impressive, part of a truly liberal education. The empty-headed hotel clerk, the boorish globe-trotter, the frivolous boarding-school miss, may have this accomplishment of languages, and not have the first rudiments of a liberal culture in language.

When, then, I speak of the prolonged and scholastic study of language as an essential of a liberal education, I have reference to acquiring the science and art of interpretation and the cognate science and art of expression. For the appreciation of literature can never come by mere untrained reading: I do not care to what kind of literature, or in what language expressed, you apply my denial. He who has made no such study of language as a liberal education implies cannot enter the inner temple of literature, he can scarcely cross the threshold of its outer courts; for the key to the temple is the knowing how to get at the meaning of any literature; and the knowing how to get at the meaning can only be acquired by the study—not of many languages as many, necessarily, but of at least some one language as the supreme expression of human thought and feeling.

In order to illustrate and enforce my opinion I turn somewhat aside for a moment to the current discussions over the place of the ancient classical languages—especially of the Greek—in a modern liberal education. The larger part of the arguments used against continuing these languages in the place they have formerly held seems to me beyond all doubt justifiable. The answers which the defenders of these languages have most employed are scarcely sufficient to ward off or to foil the attacks of their opponents. At the same time I most firmly believe in keeping the ancient classics substantially where they have been in the scheme of a truly liberal education; and I do not believe in the proposed substitution of any of the modern languages for the ancient classics. These seemingly conflicting sympathies I harmonize by answering the inquiry, why Latin and Greek should be required, in a way far more satisfactory to me than that followed by the classicists themselves. The ancient classical languages, and especially Greek, are, on account of their very construction and on account of the superiority of their equipment, by far the best media for the study of language, for the acquiring of the science and art of interpretation, for the possession and use of the key to literature.

It seems to me that very insufficient account is customarily made of the difference between the man who has enjoyed and improved this part of a liberal education and the equally intelligent and serious man who is lacking here. The latter can never, try as hard as he may, read a choice piece of literaure, of any sort or in any language, as the other readily can. The value of studying Greek, under skillful and judicious teaching, is not set at its highest even when we consider how choice are the stores of Greek literature which are thus opened to the student, if only he can master—a thing possible to only a few professors of Greek in this country—the language so as to move about at all freely in its literature. That value is rather seen at its highest when we consider how in this way a man may be best trained in skill and interest really to get at a good piece of literature in *any* language—even in his own language.

An acquaintance of mine had some years ago a confidential conversation with the public servant to whom had been committed, for a long period of years, the engrossing of the bills proposed by the successive ministries of one of the most powerful and intelligent nations on the face of the earth. This work this official had done for two prime ministers, one of whom was a classical scholar, the other a man of literary training and tastes, but without a liberal education in language study. The clear-cut, intelligible, interpretable character of the bills drafted by the former were, as a rule, in marked contrast with the confused, uninterpretable, but "flourishing" style of the latter.

As a rule, the Japanese cultivated classes acquire the speaking and writing of foreign languages with an uncommon speed and deftness. But I never knew a scholar of that nation—no matter, we will suppose, how well acquainted both with Japanese and with English—who could furnish you an exact interpretation of either one of these languages in terms of the other. This inability is doubtless partly due to the immense difference in the so-called genius of the two languages. But it is also, I venture to believe, largely due to the fact that exact interpretation—the telling precisely what do you understand this to mean as a matter of careful construing—is not made a study among the Japanese in acquiring a liberal education.

For myself, I do not hesitate to say that if I had forgotten all I ever knew of the Greek language and of the Greek literature, its study would still be worth double the time it cost in making me able to sit down with a good book, in whatever language written, and let its author tell me just what was in his mind and on his heart. I insist upon it that the practical consequences of retiring the study of the classical languages from the curriculum of a liberal education will be something quite incalculable in the way of wresting from those who call themselves cultured the key to every form of good literature.

It would scarcely seem necessary to argue that a somewhat wide acquaintance with, and fondness for, good literature is a necessary part of a truly liberal education. For theoretically few indeed are found ready to dispute this truth. But, in my opinion, this is one of the truths most likely at the present time to be left practically out of the account in making up our estimate of the studies indispensable to such an education. There is reading enough done—there is far too much reading done—by the multitude of the people and by the so-called educated classes. And of the making of many books, the gross, materialistic, sordid manufacture of something to be read—something, no matter what, if you can only so construct and advertise it that it will be read—there is no promise of an end. But the simple undisputed matter of fact is that *what* is read is not literature, and would, almost all of it, better be left unread.

It is somewhat shocking to discover how few men and women, even among those who claim the title of "educated," know or care much about really good literature. They read—the newspapers (Heaven pity them), the magazines, and the latest, most sensational novels. But with these persons there is little acquaintance or affection having for its object what is really pure, noble, and elevating in the world's best books. I regard it, then, as of the utmost importance to hold up a high standard of literary culture as an aspiration and aim of all those who would lay claim to a truly liberal education.

And here I will venture to speak quite frankly, though with perfect friendliness, concerning certain efforts of some of the modern devotees of a more purely scientific education. They are often obviously irritated at the distinction which has not as yet been wholly abolished between the degree of B. A. and the other degrees given at the end of courses which do not emphasize in the same way the linguistic and literary side of culture. They think it unjust and intolerable that graduates of scientific schools, who have been serious and successful in their studies, should not be eligible—for example—to the distinction of Phi Beta Kappa, or to other similar distinctions. Now, speaking for myself, I certainly have no exaggerated estimate of the worth of titles or of membership in any form of learned societies. But I do care a great deal about the truth, and about maintaining in this country a high standard, a sound basis, and a comprehensive range, for the recipients of a liberal education. And in my opinion, anyone who claims that a larger amount of scholastic study of the physical and natural sciences can be substituted for studies in language and literature, so as to obtain in this way that kind of cultured mind which belongs to the intellectual freeman, is simply maintaining what, from the very nature of the case, cannot be made true. Neither bestowing nor withholding titles and membership in learned societies will alter the fundamental facts of the soul's life and development. Connected with these trifles, however, impressions and tendencies may be strengthened which will work a mischief to the cause of liberal education in this country from which it will not readily recover, even if a long time be allowed for the recovery.

I hasten at once, however, to say that prolonged scholastic training in mathematics and in the elements of the physical and natural sciences is also a necessary part of a truly liberal education.

The relation in which mathematics stands to the science of nature is somewhat akin to that in which language stands to literature. In a true and important meaning of the figure of speech, mathematics gives the key into the hand of him who wishes to make a scientific study of nature. The man who is to have any education whatever must have some knowledge of mathematics; he must know enough to be honest and accurate in his business transactions, if he wishes to exercise those virtues. To conduct well many forms of business one must know much more than the mere rudiments of mathematics;

while the successful pursuit of certain branches of mechanical industry and invention requires a considerable training in this branch of education. But it is for a certain amount of the scholastic study of mathematics, as a necessary factor in a liberal education, that I now plead. Much has been made, by the advocates of a high value for the mental training that comes through this form of study, of the kind of close deductive reasoning which it employs. Such an estimate is partially justified; although it has, I think, very often been exaggerated. Of more educational value is that training which mathematics imparts in respect of quickness of insight and deftness of handling bestowed upon set problems. To enjoy and to be skillful in attacking problems is a not insignificant attainment for any educated mind. For is not life one prolonged succession of problems that demand to be solved? To be sure, most of these problems are not of the mathematical order and do not admit of solution by the methods of mathematics. But it is a thoroughly good thing for a man not to be a coward or a sluggard when he is brought face to face with any hard problem.

The truly liberalizing power of mathematics, however, is felt only when two things are attained. The first of these is a certain amount of free and joyful movement in the handling of mathematical symbols and formulæ. The other is a certain grasp upon the beautiful ideas and the wonderful laws which are represented by these symbols and formulæ. A friend of mine, who stands in the very front rank of the world's great mathematicians (a rank so thin that two men could probably count its numbers on the fingers of their two hands), has recently declared that for him the higher mathematics is chiefly an æsthetical affair; and that no man ought to study it who does not rejoice in the beauty of the ideas with which it deals. Now, of course, it cannot be maintained that such very high mathematics shall be made a necessary part of all liberal culture. But in my opinion, everyone in pursuit of this culture should have to go far enough in mathematics to get some glimpse of the ideality, and the beautiful ideality, of the world in which mathematical conceptions reign supreme.

Moreover, a truly liberal education implies enough knowledge of mathematics to use it as a key for getting at those more elementary and fundamental principles upon which external nature is built. A knowledge of these principles is itself an indispensable part of such an education. The extreme advocates of a scientific, as distinguished from a literary and philosophical culture, are accustomed to consider themselves as the only representatives of a really *modern* education. And it is undoubtedly true that natural science has only comparatively recently begun to come to the front as a claimant of rights—of something more than mere bits of tardily granted concessions. These advocates too often forget, however, that this is because natural science is itself so new, and is still so comparatively crude and ill instructed as to the most effective methods of liberal culture; is even so doubtful as to the actual results which it could show if the higher education of the country were more fully committed to its hands. For here again it is simple matter of fact that literature and philosophy were brought to a very high pitch of cultivation centuries before the first crude beginnings of real natural science were made. It is true also that the equipment and accredited method of these two-thirds of a liberalizing education are still superior to that of natural science. And now I wish I might be pardoned (though I am sure I shall not be) for saying that the products hitherto turned out, as the results of too exclusively scientific training, do not make me incline to trust the promise of substituting in this way something satisfactory for the more old-fashioned curricula. I have not observed that these products are actually men of a truly liberal mind.

On the other hand, I hold most firmly to the opinion that an interest in, and a knowledge of, nature which goes beyond that of the man who has merely the lower education, is a necessary factor in a truly liberal culture. Especially in *these* days it seems to me that no man is wholly worthy to hold the title belonging to such a culture who has not had a somewhat prolonged scholastic training in natural science. Here again I make deliberate use of the singular rather than of the plural number; and I have said a training in "science" rather than in the sciences. This training implies such a course of study as will impart, in accordance with the average capacity, a conception of what is now understood by the term *science*, and of the recognized method of scientific investigation, so far at least as it is in the main common to all the natural sciences.

Undoubtedly, the larger part of the entire body of liberal culture will always consist of intelligent opinions to which it is difficult to give a truly scientific form, in the stricter meaning of the word scientific. Undoubtedly also—to repeat the remark of a colleague, a professor of physics—"most of the advances in science consist in correcting mistakes." Notwithstanding the hardship which would be involved in the effort to draw a fixed line between the region where opinion dwells and the domain ruled over by science, the character of the conception to which the latter word answers should be made clear to every educated mind. How often does one meet men of fine literary culture who still show no little bigotry, and commit not a few important mistakes, because they simply do not know what science really is. And again, if they wanted to attain knowledge on any subject which should be worthy of being called scientific, they simply do not know how to go to work; they know nothing about scientific method in the investigation of any subject.

It seems to me, then, especially desirable in these days that the somewhat prolonged scholastic study of natural science should be made a required part of every liberal education. And if I were asked that difficult practical question, "How much?" I should be inclined to answer—"Enough to give the student a pretty firm grasp on those fundamental physical principles upon which the world of things is built, and enough of the pursuit of some form of descriptive natural science to impart the training of the powers of observation and the habit of properly connecting newly observed natural objects with groups of similar objects known before." I find myself disinclined more and more, on the other hand, to consider liberally educated, in accordance with the spirit and the needs of the age, any man who knows nothing certain of the fundamental things in physics, or who cannot turn a trained eye on at least one group of natural objects—be this group stars or stones, trees, flowers, ferns, or the human body, birds, beetles, the animals in the zoological garden, or those domesticated in the city house or back-yard.

I am also quite as firmly persuaded that a somewhat prolonged study of the human soul—of logic, psychology, ethics, and of those problems which have formed the themes of reflective thinking since man first began really to think at all, of philosophy, that is to say—is a necessary part of a truly liberal education. I find it difficult to understand how any man can attain the genuine scholar's *liberal* mind, who takes no interest in the processes and laws of his own mental and moral life, and in the progress and laws of the mental and moral lives of other men. If I were to argue in detail for a portion of these studies in the required work of every college curriculum, I think I could show how close is the relation they sustain to the most successful pursuit of every other kind of studies. Modern psychology is certainly making large claims and rapid advances, in the direction of proving itself an indispensable auxiliary to the entire group of liberalizing pursuits. Certainly no one of those learned professions, including the fourth profession of teachers, into which the great body of liberally educated youth annually pour themselves, can in these days afford to neglect the somewhat prolonged and scholastic study of the human mind; of the four, certainly neither the preacher nor the teacher. The former has been traditionally a student of philosophy. The latter is now compelled, even by the authorities in charge of our higher public and normal schools, to know something, in appearance at least, of psychology. It must be a truly humiliating experience for a college graduate, who has had no work in this subject as a part of his collegiate education, to be compelled to sit down beside the girl graduate of the high school and get his lesson in psychology.

My task will doubtless be hardest of all when I insist on some philosophical study as a necessary part of a truly liberal education. Yet in my own opinion there is no other study which is so distinctly liberalizing as philosophy. Just to face these profound problems concerning the being of the world; concerning the being, the origin, and the destiny of man; and concerning God and his relations to the world and man's relations to him; just to know that there are such problems, and what they are, and something of how the soul of man has in thought and feeling responded to them, is of itself no small part of a liberal culture. And here I speak, not from theory alone, but from experience with several thousand pupils. I affirm without hesitation, on the basis of this experience, that it does make the mind more liberal, more serious, gentle, interesting, cultured, and vigorous, to have some face-to-face acquaintance with the principal problems of philosophy. As a cure of souls afflicted with those shallow and coarse views of life, and of its most profound, most mysterious realities which dominate the age and the land, there is nothing superior to this which I could recommend. It is true pastoral and soul-saving work to induct youth, who are in process of the higher education, into the calm and reasonable consideration of these problems.

These, then, as it seems to me, are still the essentials of a truly liberal education—now, as they have always been to some extent ever since the conception and practice corresponding to the phrase, a "liberal education," emerged in the life of the race. An appeal to the history of education would show that the more ancient authorities, as well as the reformers of education on the hither edge of the Middle Ages, and the most trustworthy writers on pedagogics in modern times, are in substantial agreement. The chief differences of opinion are differences as to proportionate values, as to methods and lengths of time, rather than as to the essentials of the higher scholastic training.

But now, very briefly, I wish to indicate my opinion as to how the emphasis should be laid upon the word "modern" in the theme we are examining. What changes are desirable in the course of scholastic training, to make it better accord with the modern spirit and the modern needs? For in spite of any seeming of extreme conservatism which the opinions thus far expressed may have had, I am a pronounced advocate of modernizing the curriculum of our liberal education. I do not believe, however, that the best way of accomplishing this involves either any further extension of the elective system in our American colleges, or the exclusion from their required courses of any of the essentials of such an education.

On the other hand, our effort should be directed toward meeting the increased and altered demands of the age, in the following ways. Some readjustment of proportions is plainly required in order better to adapt the college curriculum to these demands. It is not at all certain that any ultimate diminution is required in the actual amount of work now done in either of these three great branches of scholastic training by even the most exacting of our collegiate institutions. Within these institutions the relative—but not necessarily the absolute—amount of training in mathematics and in the classical languages will probably be lessened; while the amount of training given in natural science, and the acquirement of the modern languages so far as is necessary to a possible familiarity with the French and German literatures will be increased. The way to solve such a seeming paradox is, I think, steadily to improve our facilities and effectiveness in the teaching which precedes admission to college as well as during the college course. The ten years from six to sixteen are enough, and more than enough, to prepare the average mind for the most exacting of our American colleges. But alas! how much of this time is wasted, and worse than merely wasted, by the poor teaching that prevails in the intermediate schools. The case with them is far too much like the case with successive legislatures. If, with Milton, we may define legislation as "hatching a lie with the heat of jurisdiction," must we not go on to say that the least mischievous work which each legislature does is to kill a considerable part of the brood hatched by the preceding one? And is it not true that, as the boy passes from one teacher to another in many of our public schools, a somewhat similar way of advancing his interests is experienced?

Now the men and women who have a truly liberal education must somehow sweep away these evils which lie lower down; and this as the best manner of clearing the ground for a progressive improvement in the adjustment of later studies to the modern changes of educational values. But if, in making this adjustment, we relax our hold upon what we know, by centuries of experience, to have a high degree of such value, and then prematurely substitute—especially if we do so wholly at the option of the pupil—a large amount of that whose value is as yet less a matter of long experience, I fear we shall not really raise our standard of liberal education. Practically, then, I think that, as fast as college time is set free by improvement in the preparatory education, that time should for the present needs be largely turned over to required work in natural science and in the modern languages. In this way it probably will not take long to bring about a more satisfactory adjustment of proportions among the three essentials of a modern liberal education.

Second: The education at which the college aims should meet the demands of the age by the fullest possible use of modern equipments and of modern methods. It is surprising how much of the objection urged against the required study of the classical languages is really based on the supposition that methods of teaching them, now almost obsolete, still prevail. The same thing is also true of the objections urged against the study of psychology, of ethics, and of philosophy as essentials of a liberal education. Looking back to the time when I was in college, I have no hesitation in saying that the teaching of these languages was, as respects the interest and effectiveness of its methods, on the whole superior to the teaching of mathematics and the natural sciences. But what a change has really taken place since then in the methods employed by both these classes of scholastic pursuits! I am inclined to believe that, on the whole, the improvement of the methods of teaching Latin and Greek has been quite as marked as that made by the teachers of the natural sciences.

As to psychology and philosophy, whenever these subjects are in the hands of men who have themselves received a thorough modern training, the same claim can be established. Unfortunately, however, the impression still prevails widely that anyone can teach psychology, ethics, and philosophy who can read in advance of his pupils a text-book on these subjects—especially if he happens to have had training in a peculiar set of prejudices by having been a student of theology.

But in all three groups of essentials—in language and literature, in mathematics and natural science, and in psychology and philosophy—the present generation has seen more advances in equipment and in method than all the rest of the world's past history. What is chiefly needed, in order properly to modernize our liberal culture, is the possession of this equipment in the hands of *men* who know how to use it. Here I am tempted to make a side remark which has an important bearing on all higher educational development in this country. The conduct of many educational institutions and the estimate placed upon them by the American public are such as to depreciate the teaching functions. But in time it will be discovered here—a truth already better recognized in France and in Germany—that it is the character of its faculty which chiefly determines the rank to be allotted to any educational institution. Money and all that money will buy—immense sums of money and incredible extensions of equipment—are a necessity for the most successful promotion of liberal culture. But after all, these things, and all mere *things*, are subordinate to the man who knows how to employ them so as to develop in his pupils the truly liberal mind. And if he is himself illiberal, a bigot,—whether his bigotry be that of the philologue, or that of the economist, or that of the "scientist," or that of the advocate of the new psychology,—the teacher may have boundless fame as a specialist, and unlimited enthusiasm for his specialty, but he is not wholly fit to take part in the bestowal of a truly liberal education. Never before was the need so great that the teacher should himself be a man of the widest intellectual interests and sympathies, and of the broadest culture.

It will be seen, then, that the changes in studies which appear to me necessary to meet the changes in the demands made upon the educated man are not to be sought in the character of these studies so much as in the proportions of each and in the method of pursuing them. These changes I believe should be in the main determined by those who have their education in charge rather than by the choice of those who are in process of being educated.

But beyond the liberal culture given to the average college-bred man, and higher up, lies the sphere of the specialist who puts his highly specialized pursuits upon the basis of a broad and well-proportioned, more general education. He who rises into, and remains long enough within, that sphere becomes one of the few most nobly and highly cultured. He is the liberally educated specialist—a man quite superior in respect of education, both to the specialist who has no thorough liberal education and also to the man who, having the fundamentals of a liberal education, has not also the special attainments of a master of some one subject.

I close the presentation of my opinions on this theme with a remark calling attention to its great practical importance in the near future of our country. We are all familiar with the often repeated thought that our national destiny is closely bound up with the education of the multitude of the citizens. This thought is, of course, true; and the significance of its truth may reasonably make all patriots serious; for the condition of the public education in the United States is very far indeed from satisfactory at the present time. Taking all sections of the nation into the account, we are an illiterate nation. And under political and selfish business influences, even in the best section of the nation, there is much in our educational condition to cause shame and alarm.

But it is not the condition of public education, not the character and amount of training which the state undertakes to provide for every citizen, that is the subject of my present inquiry and solicitude. There is another truth respecting the relations of education to the public welfare, which, if less obvious, is no less important. The destiny of any nation is dependent on the character of its aristocracy; and the character of the aristocracy is dependent upon the kind of education which this aristocracy enjoys. I know that there is something which sounds unrepublican and un-American, in our ears, about such a declaration as this. But I should undertake to show from history that the welfare of any nation is quite as really dependent upon the character of its clergy, its lawyers, its doctors, its teachers, and the classes that have leisure, social standing, and wealth as upon the character of the so-called common people. I know you will remind me that the most liberal culture will not make the so-called "upper" classes good, or furnish true friends and trusted leaders of the people. But neither does a so-called common-school education make the common people good. Only as education enters into the sphere of the ethical, æsthetical, and religious life does it become a real safeguard of either the aristocracy or the multitude of the citizens. But it is just the peculiar potency of the truly liberal education that it can lay so much emphasis upon what is not merely necessary to live as a smart and successful citizen, but is rather necessary in order to enter into and possess the larger, richer, and higher life of the soul.

There is one other consideration which it seems desirable to connect with this subject. Rightly or wrongly, temporarily or permanently, there exists a widespread lack of confidence in representative government. Here in this country, where the powers of the representative bodies, both in the State and in the nation, are more extensive and unlimited for good or for evil than anywhere else in the world, this distrust is perhaps most strong and most on the increase. The simple truth is that no class, neither the so-called laboring class, nor the cultivated class, has any large amount of confidence left in the men who make laws for them all. Municipal, State, and national legislative bodies are almost universally distrusted, feared, and despised. This is a fact, whether it is a fact that admits of rational justification or not.

There are plain signs that some form of virtual aristocratic government is likely to be widely established in reaction from the extreme evils of democracy—a rule of the *best*, in some meaning of the word "best." But shall it be the man "best" to lead the populace by deceiving them as the self-deceived or shrewdly hypocritical demagogue has done so frequently in the past history of governments? Or shall it be the man, or the corporation, or the syndicate, whose length of purse and elasticity of conscience best stand the drain upon it made by the demands of the law-makers; shall it be the rule, by bribery, of the plutocracy? Or shall it be the rule of the men of liberal minds, of minds set free from bonds of prejudice and of avarice, and well acquainted with those laws of nature and of the soul, of man as a thinking, speaking, social, and religious being, which it is the business of a liberal education to impart? I sincerely hope that our really governing aristocracy in the country will be of this third class. And it is in the fitting of this class for the life which lies before them as the genuine aristocrats that the supreme value of a truly liberal education consists.

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III

THE EDUCATIONAL THEORIES OF FROEBEL AND OF HERBART[1]

The last part of the eighteenth and the first part of the nineteenth century will always stand out clearly as the brightest period in educational development. The revelations of this productive era were more important than its revolutions. The most magnificent evolutions of the period were educational, not military or political. Among the many leaders of this era in the great work of educational reform, Pestalozzi, Herbart, and Froebel are the central figures. If all other educational literature were destroyed, the principles of these three men would still reveal all the vital forces that are molding the educational systems and methods of to-day, both in aims and processes. These men were all living at the same time, and their spheres of labor were not far apart. Pestalozzi was born thirty years before Herbart and thirty-six years before Froebel, and to him more than to either of the others must be given the credit of the educational awakening. He aroused Europe, and Herbart and Froebel must have been influenced by the favorable educational conditions into which they were born. Froebel undoubtedly owed more than Herbart to Pestalozzi, because he was a student and fellow-worker with him.

Many of Pestalozzi's educational principles had been revealed by Comenius and Rousseau, but Pestalozzi rediscovered them and discovered other principles for himself; and his ardent enthusiasm and deep, sympathetic love for childhood made educational principles living forces in a new and most impressive way. His schools became most suggestive object lessons, and through them his educational principles obtained a vitality that made them controlling forces, which started a much needed educational revolution. Herbart and Froebel were both more scientific than Pestalozzi in their methods of dealing with the subject of education. They worked out their systems logically and constructively; he was emotional and instinctive.

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[1] A paper prepared to be read before the Department of Kindergarten Education of the National Educational Association at Denver, Colo., July 11, 1895.

In their study of the child as the basis of a sound pedagogical system, Herbart and Froebel were in harmony in accepting the parallelism between the progress of the race and the development of the child. This idea was not original with either of them. Many of the ablest philosophers and theologians have held this view, and Rousseau and Pestalozzi had brought it within the range of educational discussion before the time of Herbart and Froebel. Froebel made more use than Herbart of this idea of similarity between the culture-epochs in the growth of the individual and the race. It aided Herbart to decide what instruction is best suited to the child, the youth, the man at different stages of his development; to Froebel it helped to reveal not only suitable material for instruction, but proper processes or occupations by which the child, the youth, and the man should define and increase knowledge and power.

Both Herbart and Froebel studied the child in order to lay down a system of education that would help to ennoble man and enable him to work out his highest destiny. They were fully in accord in regard to the true aim of education. Both made the development of moral character the great purpose of all education, and their study of the child was made to find the surest way to reach this desired end. There was a radical difference, however, in their attitude toward the child. Herbart studied the child to find the best that could be done for it; Froebel studied it to learn how it could be aided in working out its own best development. Herbart magnified the work of the teacher; Froebel magnified the work of the child. Herbart made instruction and Froebel made self-activity the source and cause of growth in knowledge and character.

This difference of view-point leads to the chief distinction between the work of these two great educationists. Herbart discusses the work of the teacher, and shows what should be taught to the child, when it should be taught, and why it should be taught, with occasional suggestions as to how it should be taught. Froebel, on the other hand, considers chiefly the work of the child, and endeavors to lay down a complete system of education, by which the child's entire nature may be called into vigorous exercise. Froebel keeps constantly in mind the work of the teacher, and he has clearly defined ideas regarding the order in which knowledge should be presented to the unfolding mind; but the basis of his pedagogical system is growth through self-activity of the child. He discusses the same problems as Herbart, but he reveals the child's part in the work of education, and tries to show the teacher how to guide the child in doing its own work without interfering with its spontaneity. Herbart improved the work of his predecessors, Froebel revolutionized it.

President De Garmo summarizes the work of Herbart under three heads: "(1) The development of a system of psychology capable of immediate bearing on the problems of teaching; (2) the scientific application of this psychology to education; and (3) the revelation of the possibility of making *all* the activities of the schoolroom, including especially instruction, bear directly upon moral character." Even those who differ from Herbart in regard to the foundation-principle of his system of psychology must recognize the wonderful ability with which he expounded it. His analytical power is simply marvelous. He sees all sides of a question clearly, and sometimes explains the details of opposing or qualifying principles so profoundly as to leave one somewhat doubtful as to the course of action recommended. A complete series of educational maxims, covering the general fields of discipline, training, and teaching, might be made from his writings. Certainly no other writer has given dignity to so many commonplace theories; but, on the other hand, no writer has made a closer analysis of mental operations.

Even those who reject the Herbartian theory of soul-growth by the accumulation, enlargement, and modification of ideas will be ready to acknowledge the fairness of the claims made by President De Garmo in his summary of Herbart's work, with a slight explanatory statement. The third claim may be misunderstood to mean too much. The expression "all the activities of the schoolroom" means infinitely less as applied to Herbart's system than when used in relation to the system of Froebel. With Herbart it refers chiefly to the work done under the specific direction of the teacher, but in Froebel's case it always refers specially to the self-activity of the pupils. The phrase, "including especially instruction," shows that in Herbart's system it is the teacher's work, "especially the work of instruction, that bears directly on moral character." Herbart makes this very explicit throughout all his works, and summarizes his entire pedagogical system in two brief sentences: "Instruction will form the circle of thought, and education the character. The last is nothing without the first, Herein is contained the whole sum of my pedagogy."

Having laid this foundation he is naturally led to rely on the doctrine of interest as the central element in his pedagogical system. Interest, desire, action, will, is the order of the sequence of human development in his psychology. The doctrine of interest has been expounded by Herbart in a way that leaves little room for enrichment by his successors. With him interest is no passing fancy, no temporary attraction to things or subjects. It covers the whole ground of knowledge and of sympathy; "knowledge of the manifold, of its law, and of its æsthetic relations; sympathy with humanity, with society, and the relation of both to the highest Being." He describes interest as: "The joy of life, and the elevation of soul which knows how to part from life." He makes it, in the language of one of his greatest interpreters, Ufer, "the root of volition." He has been severely criticised for making action lead to will, instead of accepting the commonly accepted idea that will leads to action, but those who dissent most strongly from his views regarding the relationship of will and action, may learn quite as much from his pedagogical use of interest as those who are his most ardent admirers. Opponents as well as disciples may have their ideas enlarged and defined by Herbart's discussion of interest, many-sidedness of interest, proportionate many-sidedness, empirical interest, speculative interest, æsthetic interest, sympathetic interest, social interest, religious interest, absorption, and reflection.

Herbart's system made instruction the basis of virtue. Ufer crystallizes Herbart's teaching on this point in the sentence: "When instruction has generated knowledge that incites to volition, and that is controlled by ethical ideas, its task is done."

It is easy to see how essential it was for Herbart to insist on apperception and correlation or concentration of studies. Apperception to Herbart meant more than the accumulation of knowledge, or even of new knowledge allied to what was already in the mind. It meant mind-awakening, mind-activity, mind-defining, and mind-enlargement, not by accretion but by assimilation of the new knowledge with the corresponding mind content, to form a greater mind content which should be a unity and not an aggregation of related ideas.

Froebel's educational system rests broadly on two great laws: the law of unity, and the law of self-activity. His fundamental thought was unity: unity in the elements of individual power, physical, intellectual, and spiritual; unity in the exercise of human powers, receptive, reflective, and executive; unity of the race, unity of man with nature, and unity of man with God. This law of unity led Froebel to insist even more strongly than Herbart on the perfect articulation and harmonious correlation of studies. He criticised severely the lack of unity in the studies of the school he attended when a boy, and endeavored to remedy this defect in a school in which he taught while a student in Berlin. In all his after-work he made unity an essential. He made this law of unity the basis of his kindergarten system. Every detail of his system in the gifts, occupations, games, songs, and stories, is related to this central thought. To those who see behind the material and the occupations, the kindergarten is the objective embodiment of true concentration, and Froebel strongly urged that this same principle of correlation should dominate the arrangement of school programmes, and the methods of teaching in the schools.

Froebel's view of the human soul was directly opposite to that held by Herbart. Froebel believed that the child has within him a self-active soul, an element of divinity, the selfhood or individuality of the child, and that this develops by being put forth in gaining a knowledge of its environment, and in performing the duties pertaining to the social relationships. These opinions led him to discover his law of spontaneity or self-activity, which he made the underlying principle of all his developing and teaching processes in the kindergarten and in the school.

He did not mean by this law of spontaneity that the child has to acquire all knowledge by himself without the aid of the teacher. He gave instruction its true value. He did mean, however, that no instruction really becomes a content of the child's mind in the highest sense until the child has made a creative use of it in some way. Froebel's lessons always have two parts, the instructive and the creative. The teacher gives new instruction, and immediately the child makes an original use or application or modification of it. In this way, by his law of self-activity, Froebel secures to the fullest possible extent active, co-operative interest, and the most productive apperception. The child must be more interested and more definitely attentive when using knowledge than it can possibly be in receiving knowledge. Executive attention must be more developing than receptive attention, even if the pupil acts in carrying out the plans of the teacher; it becomes still more productive when the pupil executes its own plan or carries out its own design.

Apperception, too, is more complete when the child is self-active than at any other time. The mind-content corresponding to the new presentation rises to the surface to receive it with greatest energy in response to an impulse to definite action in producing or accomplishing a creative purpose. In this way the assimilation of new knowledge with that already in the mind becomes most perfect, and the mind content so produced responds with greatest freedom, and with most vital intensity, to the subsequent presentation of a new idea. The superiority of the active apperception of creative self-activity over the relatively passive apperception of the most interested receptive attitude of the pupil's mind, results therefore from two causes: the mind acts with more potency in the first apperception, and the resulting mental content possesses more perfect homogeneity and more responsive energy. The executive tendency of the mind secured only by self-activity is a most essential element in character.

In discipline and training Herbart was much more coercive than Froebel, although less so than most of his predecessors and some of his successors. He made a much larger use of compulsion, both in forcing attention to study and in controlling the conduct, than Froebel. Froebel recognized the selfhood of the child as the true source of interest, and the surest controlling force. He would not check effort, because he desired above all else positivity of character. He would not stop the current of real individual energy, he would change its direction when it was wrong by changing the pupil's center of interest. His constant purpose was to secure reform and progress through the child so that it might become self-directing and self-progressive. Herbart recognized with great clearness the necessity for control; Froebel saw the harmony between spontaneity and control, "the perfect law of liberty." Yet Herbart acknowledged the individuality of the child. He wrote many wise things about it. He says, for instance, "The teacher ought to make it a point of honor to leave the individuality as untouched as possible." He criticises severely those teachers who "dominate the feelings of the pupil, and holding him by this bond, unceasingly disturb the youthful character to such an extent that it can never know itself." But even his disciples acknowledge the fact that there is at least an apparent incongruity between his conception of the mind of the child as built up "entirely of presentations," and a true recognition of individuality. Herbart himself saw this. It is clearly impossible to give individuality its full recognition when the conception of the soul is reduced to the smallest possible degree. The more the soul idea is limited, the less important does individuality become, and the more potent does the teacher become as a decider of destiny. Froebel's conception of the soul as an element of Divinity in the child, gave him a reverence for individuality so profound that he demanded of the mother and teacher two things for the child: freedom, and opportunity for creative activity in applying and extending the knowledge gained by experience and instruction.

The characteristics of the systems of Herbart and Froebel may be summarized as follows:

Both Herbart and Froebel made high moral character the great purpose of education. Herbart limited the original capacity of the human soul to one power: "that of entering into relations with the external world," or as De Garmo defines Herbart's idea, "he assigned to the soul merely the capacity of self-preservation." Froebel regarded the soul as a germ of Divinity that must inevitably develop in power and that should develop by its own creative self-activity. Herbart studied the child to mold it; Froebel studied it to guide it in its growth. Herbart studied the child as a philosopher; Forebel studied it as a sympathetic friend. Herbart's recognition of individuality was limited by his conception of the inherent powers of the soul; Froebel's idea of the child soul necessarily led him to reverence individuality as the central element in human development, and as the thing that made the increase of human power desirable. Herbart saw the need of control much more clearly than the need of freedom; Froebel saw the harmony between freedom and control. Herbart made instruction the basis of virtue; Froebel made morality depend on true living in the home and in the school, on the awakening of the ideal as a counterpoise to the sensual and on the recognition of and reverence for the life principle in and behind nature. Herbart made will result from action;

Froebel made action result from will. Self-activity developed the will according to Froebel, but the will increased in power as the result of its exercise in causing creative self-activity.

Herbart's contributions to pedagogy are a matchless discussion of interest, a thorough exposition of apperception, and a philosophic foundation for co-ordination of studies so that they may produce the most definite and most beneficial results on character. Froebel revealed the law of creative self-activity as the source of growth, including in it the most intense and most certain interest and the most perfect apperception; and the law of universal unity, in which unity of studies (correlation or concentration) was definitely recognized, although it is not the most important part of Froebel's comprehensive idea of unity.

Froebel's chief influence on educational forces rests on his recognition of woman as an educational factor outside of the home as well as in it, and his extension of the period of training by providing his comprehensive kindergarten system for little children. The kindergarten is an objective illustration of the results of reverent child study, which has undoubtedly led to the universal interest in the systematic study of the child which, during the past ten years, has become the most prominent characteristic of educational investigation. Froebel also influenced educational thought and practice to a large extent by his use of play as an educational force. Others had recognized the value of play, but Froebel was the first to organize play as an essential element in training. Herbart aimed to produce in his pupils the spirit and the power of co-operative and productive activity. In this ideal he was the peer of all other educators except Froebel, and the superior of most of them. Froebel's ideal was co-operative, productive, and creative self-activity.

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IV

REPRESENTATIVE EXPRESSION IN NATURE-STUDY

Education is the natural and symmetric development of thought and action. The poise and strength of the individual are determined by the mutual relations sustained by these two correlative aspects of character. At the focus of all operations of natural law upon the being there is a resultant in thought; the endeavors to live in accord with the law find a common resultant in action. All efforts to realize thought through action produce tangible results in expression.

The infinite possibilities of human growth under the free play of thought and action have never been witnessed. But a prophecy of what they may be can be learned from a thoughtful study of a little child. Within the first six years it becomes a prodigy in acquirements and in power. Its acquisition is great because its open soul, without the obstruction of prejudice or the bias of false training, has freely admitted all the influences amid which it has lived. It has a marvelous power, because, absolutely unfettered, it has in its own weak but genuine way realized its every thought through direct action in appropriate expression. Parent, teacher, philosopher, alike stand amazed before these attainments in childish growth—attainments never again equaled in a like period of time. But the initial purposes of the new life have been wrought at a tremendous disadvantage. It has encountered every obstacle that can thwart a human being, except one, the deadly influence of tradition. Within the same period of his greatest achievement, one-half of all those who were born with him have gone to untimely graves, the unimpeachable witnesses to the uniformly low vitality of early years. Of those who survive, their muscles are untrained in definite action, and they are seriously lacking in strength. The vision is blurred, the hearing confused, the touch undefined. Yet, despite the treachery of all the senses, and the weakness of all his parts, the child enters the school with garnered wisdom and presents himself to the teacher a free, bold, and self-reliant soul. Such is the magnificent work of nature.

A decade passes in the schoolroom, and he has become, in the language of Emerson, "timid and apologetic; he is no longer upright; he dares not say 'I think,' 'I am,' but quotes some saint or sage. He is ashamed before the blade of grass or the blowing rose." The fall of man is complete! He goes forth into the world with the sources of his true nurture dried at the fountain and with shackles upon those limbs that once rejoiced and were glad in their freedom.

The fundamental fact that the schools must henceforth recognize, is that thought and action are inseparable. It is a primary proposition in modern psychology that every thought tends to produce a movement or to check one—in either case tending toward action. The application of this one law, alone, is destined to revolutionize all our present methods in education. It means that every action required in the schoolroom must have behind it the stimulus of intrinsic thought. It means that every genuine thought must be allowed to have its free and full expressive action.

The introduction of nature-study into the common schools proposes, as its final purpose, to establish around neglected childhood the natural environment which the laws of its growth would seem to require; to retain that environment about the being throughout youth and maturity as the fundamental conditions upon which manhood must rest; to cultivate an intelligent knowledge of all the influences that play upon him that he may the more closely determine their value and their dangers. It is not to be a mere tonic for the senses; but in the search for the profound adjustments of the being in the present, with the purpose to transmit nothing but the highest truth to the future, nature-study enlists the entire soul.

The relation of expression to the work of representation, and its relation to that of presentation, are both organic and of equal importance. The merit of *representation* depends upon the character of *presentation*. When the methods of presentation are in accord with the nature of the being, all difficulties in representation rapidly disappear. All modes of presentation will harmonize with the instructor's idea of how the mind is to receive what is offered. If the usual treatment of nature-study may be taken as a guide, the ordinary conception of the mind in its receptive aspect is exceedingly crude and ill-defined. Apparently, in sympathy with the Baconian doctrine that "there is no stond or impediment in the wit, but may be brought out by fit studies: like as diseases of the body may have appropriate exercises," at one time a feast is prepared for the senses; at another time an offering is made to the intellect through which it is hoped to reach those civic and economic aspects of character that stand related to the social, political, and commercial adjustment of the race. The fervid and sometimes sentimental appeals to the æsthetic and moral aspects of character are supposed to rest upon still different grounds. As a natural result of this arbitrary and disconnected presentation, man's expression partakes of the same heterogeneous character. The attempted representations of sense are lifeless forms; those proceeding from the intellect may find tangible form in arrant knavery; the moral nature finds satisfaction in the blind genuflections of fast day, and the æsthetic nature vapors itself away into imbecility.

The fragmentary and unsatisfactory results in representation are wholly due to wrong and misdirected efforts in presentation. The mind cannot be worked over by piecemeal. It cannot be educated in sections. Nor is it possible to develop its powers from without to within in a serial order. It is vain to proceed upon the theory that the various functions of mind can be trained in separate schools and afterward be united into a living whole. All the manifestations of mind in its development, like those in the growth of a bud, proceed from a common and all-controlling center. In the presentation of a subject of study, therefore, it is of primary and fundamental importance that this center of organization be reached if the consequent action is to be rational and the expression intelligent.

The controlling center in the mind of a child, and a dominating one throughout life, is the æsthetic sense. The child's earliest and most general classification of all things is the beautiful and the ugly. Long before the relations of utility, long before those of morality, the æsthetic relations make their appeal and find a warm and sympathetic response. Of first importance is it, therefore, that all things which he is to study shall be presented to the child from the standpoint of the beautiful. Woe betide that which, in the mind of childhood, finds a doom in a place with the ugly; the early instincts will long hold their sway against years of mature reason and philosophy. The ugly can never find a welcome in human consciousness; the only pretext by which it may receive even temporary audience is the plea that it has been misapprehended or misunderstood. The mind naturally gauges the eye to receive nothing but the harmonies in nature, and it attunes the ear to receive nothing but her symphonies. The first commandment in nature-study is to seek first the beautiful in nature, and unto it all else shall be added.

All study may be resolved into an effort to acquire knowledge of relations, with the ultimate purpose of determining the natural law of the phenomena according to which those relations are established and maintained. The æsthetic unction of the mind is aroused in nature-study in several ways, to the diversity of which correspond the various physiological means possessed by the organism for receiving external influences. The different modes of presentation through which the various relations reach the mind are form, color, sound, odor, taste, motion, and adaptation. Of these different varieties, representative expression has to deal directly with form and color, and, indirectly and partially, with motion and adaptation. The fundamental presentation which is implied in each of the others is form. The mind receives the phenomena, and perceives the relations of form chiefly through the fundamental sense of touch, the sense from which all the others are derived. By this means, the following data are fixed in the mind: (1) The structural qualities of the substance involving cohesion and texture. (2) The properties of matter through its resistance; that is, its hardness or softness. (3) The mutual relations of those planes in which the object finds its spatial limitations; that is, its shape. (4) The absolute and relative extent of the planes of limitation; that is, its size. (5) The general character of the limiting surfaces; that is, its smoothness and roughness. (6) The direction, extent, and mutual relations of those lines in which the limiting planes meet; that is, the outline of the object. These data originally are derived through the sense of touch. Experience, however, enables the mind to perceive these relations by inference, and with incredible rapidity, through sight. But, in case of doubt, touch alone is competent to give the final confirmation or denial.

The very earliest æsthetic response in the child is probably aroused by the smoothness of the object. The gentle contact of the velvety hand with a smooth surface and the crooning response of the young babe, even while still enshrouded by the mists of unconsciousness, mark the opening of that organic circuit in the being which is for a few short years to be a channel of transfer and direction for the mysterious forces of the world. The feeling in consciousness due to the arousal of the mind's æsthetic function is one that each being can appreciate but cannot definitely and adequately describe. Nor can it be explained why, under certain presentations, the æsthetic feeling is aroused; but the conditions necessary for its awakening can be definitely stated. It is likewise true that, just as the feeling may be reached through different avenues of sense, the action which proceeds from it is not discharged through one channel, nor always through the same channels; it therefore happens that there is in full expression great variety and the possibilities of much completeness in the realization of all the beautiful and ennobling thoughts that may find birth in the soul. In the past, the nature of the instruction given to children has effectually choked up nearly all the channels of action except that afforded by language, oral and written, and the result is that the great majority of people are not only incapable of doing the work of artists, they are incapable of having artist's thoughts. Worse than this, through the long disuse of so many of the means that naturally minister to the mind, many persons have become almost incapable of having any kind of thought at all.

Where several different modes of expression are being permitted, there is a wrong conception as to the advantages to be derived from the variety. Each one is treated as if it were a direct repetition or counterpart of every other one. Against this the instincts of the pupils rebel. If a child has already expressed himself through language, he knows by the instincts of common sense that it is folly to merely repeat himself in a drawing or a model, and it is useless to ask him to do so. The various modes of expression cover one another to some extent; nevertheless the motive which should actuate him in making his drawing or model should be to express what his language did not and could not portray fully. The reason why pupils do not more freely and more willingly move from one mode of expression to another is wholly due to a faulty and indefinite presentation. An interesting illustration of the darkness in which many teachers labor is found in the endless and utterly bootless discussion as to whether pupils begin naturally with the *outline* or with the *mass*.

As previously hinted, the conditions under which form appeals to the æsthetic sense may be somewhat definitely stated. One of these seems to be that the outline shall be made up of lines in which curves rather than angles are the prominent features. Another is that opposite parts shall present similar though not necessarily exactly the same aspects. The unsymmetrical appears in nature more frequently than the symmetrical, and it is usually much more admired. A third condition is found in the nature or condition of the bounding surface. There is no question but the æsthetic feeling is immeasurably enhanced through a knowledge of the adaptation of the form. It is through the function of form that nature-study may be made to take its most powerful hold upon the mind of man. In the manifold adaptations of her various forms, Nature has made use of every line, of every curve, and of every pose that is known in the domain of art. The adaptations in form through which nature is allied to art are all of mathematical exactness; all are determined by a mathematically exact balance of the forces of nature. Art and mathematics, therefore, are not antagonistic; they are not even independent of each other, because they stand organically related. A common but mistaken conception of mathematical form is that it is always *regular* and *symmetric*, as in the case of the cylinder, cube, cone, and triangle. Yet the unsymmetric leaf, graceful and of artistic outline, and the twisted trunk of a tree represent none the less mathematically exact forms. The mighty orbits of the heavenly bodies are not more truly mathematical than is the devious path cut through the air by the butterfly in its wavering flight. The feathery snowflake, finding its way to the earth by an inconstant course, is leading the whole world and every other body in the universe through the same uncertain kind of dance. The mathematical relations of matter are never lost or absent; and a rational study of form demands that they be taken into account, whether they be considered from the standpoint of science or of art. The regular form may be conceived as being the result of the equal and symmetric distribution of forces about it; the irregular form represents an unequal or unsymmetric distribution of the forces, internal and external, but both forms represent a balance of the forces and stand at their mathematical center. This magnificent world has been so richly endowed that even the dullest and most stupid of mortals may appreciate some of its beauties; but for him who by natural gifts and education is able to look through the outward appearances and recognize the laws by which the beautiful retains its delicate poise in nature, the feelings are enhanced a thousand-fold.

It is not more difficult to say why a given presentation arouses the æsthetic feeling than it is to determine why this feeling gives rise to action. The general purpose of action seems to be an effort of the being to place himself in a finer harmony with his environment, and to maintain a perfect poise amid all his delicate relations. When one rests on the brow of a hill at the close of day, and looks across a broad valley, through which winds the course of a silver stream; as his soul bathes itself in the light reflected from cloud, hilltop, and woodland in the myriad tints and shades of a summer sunset, his every action is to the end that not a voice of wooing nature shall be unheard, that not an influence shall be obstructed or unheeded. And when, with brush in hand, this rapture finds its realization upon canvas, that the present exaltation of his soul may not be wholly lost, and with the purpose to have all mankind in all time know something of what he feels—then, upon that spot and in that hour, is an artist born.

The presentation of form through the sense of touch involves the three dimensions, and the corresponding expression of these spatial relations is found in making and modeling.

Making is the most elementary from a psychological point of view, because of the absence of all symbolism. It involves exactness in size and shape, and requires the use of the same material that is in the object presented. It is, therefore, of fundamental importance that children be allowed free and unobstructed expression by this means. Practically, the chief difficulty lies in the nature of some of the materials it may be necessary to use. The pupil can acquire expression by making only as he progresses in a knowledge of how to use certain tools, and in an acquaintance with the grain of wood, the texture and hardness of iron, and so forth.

Modeling calls for the three dimensions, and also requires exactness in form, but may be independent of size and material. It is therefore partially symbolic; the realization of the thought is less complete than in making. As a mode of expression, however, it has the very obvious and decided advantage of allowing a choice of such materials as can be easily manipulated by children, and its practical value is therefore very great. The simplicity of these two modes of expression is due to the fact that the representations in both cases correspond as exactly as may be to the objects as they appear when revealed through touch. The judgments derived from touch are taken by the mind to be conclusive, and the corresponding representations are unquestioned and definite.

The mind, however, receives presentations of form not only through touch, but, through the medium of light, acting through the eye, it is enabled to have certain judgments of form by sight which are derived from color. Those judgments which arise from the *limitations* of color involve the subject of outline. The presentation of form through sight involves but two dimensions, length and breadth, and consequently the spatial relations which appear in the corresponding representative expression must all lie in one and the same plane. By reason of the differences in the *quantity* and the *quality* of light which the eye receives, the experienced mind is able, through the great variety of color, tint, light, and shade that is thus presented, to infer the third dimension. The so-called practical demands of life are, therefore, continually compelling the mind to express the judgments of sight in the same terms and in the same forms in which it expresses the judgments of touch. The constant censorship of the touch over the sight judgments has almost obliterated the latter from the consciousness of most people. The consequence is, there is a almost universal lack of ability to employ those forms of representative expression, drawing and painting, which deal primarily with sight judgments. It is of immense importance to have children begin to use these forms persistently at a very early age. The child's experience does not at once compel him to translate his sight judgments into those of touch; the two modes of presentation are distinct, and his expression corresponds. It is a well-known fact that a child does not trouble himself about perspective, and yet his crude drawings and paintings of landscapes will show it from the first. This has been explained sometimes by saying that children *see* perspective, better than do their elders. The truth is, they do not see it at all, as commonly understood, or, at least, but slightly. They see and represent the displacement of the objects, right and left, above and below, with due regard to relative size, light, and shade, and perspective takes care of itself. It is true that even by the time the child has reached the age which admits him to school his touch and sight judgments are already much confused as to objects which are near to him. With regard to objects some distance away, as a rule, the judgments of sight are accepted as they are. The subject selected for study should, therefore, not be too small or too close; it is vastly easier for him to represent a grove of trees a quarter of a mile away than it is to express similar spatial relations in a group of blocks on the desk before him.

The spatial relations perceived by the mind through sight find representative expression in painting and drawing. Painting has to deal primarily with color relations and secondarily with those of form in two dimensions. Drawing has to deal wholly with form in two dimensions, as shown by the limitations of color, that is, with outline. Except in the case of purely mechanical drawing and diagrams these two modes are never wholly distinct. In every painting there is more or less drawing, and in every drawing where lights and shadows occur the essential feature in painting appears; that is, representation of mass or surface. Notwithstanding that the two modes of expression have much in common, there is one point of radical difference between them. In a drawing, dealing with outline, the pupil must represent the object *minus* everything else in space: in a painting, dealing with the color relations, he must represent the object *plus* everything else in space. In drawing, the object is shown by isolation; in painting, it is shown by association. This distinction in representation is based upon a corresponding distinction in presentation which teachers, as a rule, totally ignore. The object that is being studied is presented ordinarily in precisely the same way for both the drawing and painting lesson, although the pupil may be supposed to express very different relations in the two exercises. The difference in the two modes of presentation, that is here insisted upon, may be effected by proper attention to what is called the background of the object. To be placed properly for a drawing the object should be presented in empty space, or as nearly so as possible. This may be simulated by placing behind the object a plane surface of such color as will most sharply contrast with that of the object. Usually the effect is produced by a white sheet of paper. When the presentation is thus made with due regard to what is to be expressed the pupil will naturally begin with that which stands out most clearly before him, to wit, the outline. On the other hand, if the pupil is to express the color relations of the object by a painting, it is evident that the object must be so placed as to show him what its natural color environment is.

But it happens very frequently that in preparing the object for a painting lesson—that is, preparing it so that the pupil may see and express color relations—the teacher arranges the object exactly as he would for a drawing lesson, with a strongly contrasted and absolutely uniform background. The result is that nearly all of the so-called painting is nothing more nor less than drawing with a brush and color instead of with a pencil. The pupil usually follows the law by which color limitation is expressed and begins with outline, and is naturally very much perplexed when the teacher explains that he should begin with mass. But when the presentation is made with the object in setting of its natural surroundings, the outline is always softened down, and he begins to represent that which is directly presented, namely, the *mass*. In a proper presentation of color relations, it is necessary to observe a rule similar to that laid down above touching perspective. Those objects which are small and near the pupil, especially within his reach, have their outline strongly defined for him through the sense of touch. Under such circumstances the touch judgment will most likely overpower that of sight, and the representation will begin with outline. It is advisable, therefore, with beginners, to have the objects at such a distance that the sight judgments may not be thus obscured by those of touch.

From the foregoing, it will be clear that the various modes of representation are not repetitions, but that each has a distinct function that corresponds closely to a particular phase of presentation. And if it be true, as is here maintained, that the mind can *retain* its power to receive given presentations only on the condition that the feelings so aroused have full play in expression, then, in the light of what the schools have done and are doing, it is no longer a mystery why ninety-nine people out of a hundred go through this world with eyes seeing not, and ears hearing not.

The fundamental rules which govern all modes of presentation must, of course, be derived from the mind's inherent capabilities for receiving them. The cause of nature-study has suffered immensely on account of the teacher's ignorance of the laws according to which the mind acts in its receptive capacity. The outward presentations all come to the child-mind as *great irregular, undefined wholes.* From the whole he goes to the parts, and step by step to the minutest details.

From the undefined he proceeds by mathematical judgments to the definite; from the irregular, he proceeds by similar means to the regular. The pupil's representations, of whatever form, must always correspond to this order of development. The so-called, and egregiously miscalled "bad work" of beginners in all forms of expression is the only natural basis for good work. The careless freedom with which the pupil's mind receives finds an exact correspondence in the way the body acts. He must be permitted to see great organic wholes and then be allowed the freedom of large surfaces in expression. As a rule, the practice of teachers is directly the opposite. The pupil has been required to look at a leaf when his soul longed for a landscape; he has been completely disgusted with the near when he might have been enchanted by the distant; by the study of the lines and angles in cylinders, cones, cubes, and prisms, his mind becomes stiffened and benumbed, when it might remain pliant and sensitive through the study of nature's forms. Through the use of his fingers he has been distressed, when through the use of his arm he could have been delighted.

This reversal of the natural process with childhood would seem to receive its only sanction from a mistaken application of the axiom that the mind must proceed from the simple to the complex. The landscape, by reason of its thousands of details which it is known to contain, has been adjudged the complex; while the leaf, with its comparatively few details, has been thought to be the simple. But to the child the landscape is by far the more simple; for him it exists as a great irregular mass of color, which finds its first crude representation in a blotch; but the sinous contour of the leaf, the straight lines and the angles of the prism give him infinitely more trouble, because in their symmetry and exactness of proportion they are to him vastly more complex. The attempt to introduce the study of form to childhood by a presentation of geometric figures, the fixed and highest generalizations of form, is to reverse every law by which the mind reaches the truth.

Each mode of expression has its own intrinsic worth, but it does not follow that they take equal rank in the study of nature. The central point never to be lost to sight in nature-study is *life*—the living thing. The whole of the subject may be included in a consideration of the origin of life, the conditions of life, the development of life, and its destiny. In these various phases of study, representation by making is of least importance, relatively. Its use is wholly confined to preparation of conditions for study. The next highest in the scale of importance is modeling. The infinite diversification of form among living things makes the application of this mode of expression almost universal, while the rare grace and beauty of the forms lift the representations by models to the plane of the fine arts. But the highest and most splendid possibilities of expression in nature-study must be conceded to be through color. Life everywhere manifests itself through color. Form may be living or dead; but the color bespeaks life with as much certainty as does motion. Color is even as the breath of life; not only does it distinguish the living from the dead, but it mirrors forth in changing tints every varying shade of health or disease. The withdrawal of color is the earliest warning that nature has issued a summons for ourselves or loved ones, and its restoration is a bow of promise to the anguished heart. Everywhere the fading and glowing of color mark the rising and falling of life. Would you gain some conception of the forces of life? Look forth over the drear landscape of winter and prophesy the spring. All the ravishing loveliness that comes into your picture enters through the portals of life. The dissections of form, down to the minutest fiber, do not more clearly display the magic of life.

Science, therefore, no less than art, makes the demand that nature shall be studied through color as well as form. Science no less than art aims at nothing short of the fullest realization of the soul of the man through the highest action. This realization is not reached when machines are constructed, when railroads are laid, when steamships are built; but only when, through these marvels of genius, man comes to know and feel that that which in him is, is a part of the infinite and eternal; that his highest duty is to hold himself in due submission to those laws that bind him to the wondrous whole. The child who begins naturally with the great aspects of nature—the cloud, the mountain, the forest, the sea and air—will at last strain his eye through the microscope in his efforts to penetrate her most inmost secrets. How puny the conception that to express nature is to copy her! How preposterous the supercilious conceit that, pandering to a debased ignorance, makes an effort to improve her! Nature is neither to be copied nor improved, but to be completely realized in self.

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V

THE IMPORTANCE OF PHYSICAL TRAINING IN CHILDHOOD

Professor C. Lambroso has recently said very truly that "man detests new things and tries his best to escape, and only yields to overpowering necessity, or acquired usage."[1] These words are peculiarly applicable to everything concerned with the education of children, which, one would suppose, might easily be adjusted to meet the requirements demanded by a better knowledge of the child itself; yet, as a matter of fact, it is only modified with considerable difficulty. Traditions or superstitions once acquired rule the mind with overpowering force, and reason alone is hardly strong enough to dislodge them. They have been slowly evolved out of some innate need of the organism, and will continue to maintain their supremacy until driven out by some more recently developed need of a still more urgent character.

Many years ago, it will be remembered, Froebel wrote: "We cannot separate the body from the mind and soul, of which it is the outward expression; but in the beginning of life the intellectual and spiritual nature exist only in the germ, and the physical nature, with its instincts and necessities, plays the prominent part. If, then education is to act as a guide to natural development and not as a hinderance, it must take this fact into account, and, during the first years of life, devote itself chiefly to calling out and cultivating the limbs and senses, which are intended as organs of the mind and spirit, so that when the latter begin to act they may find fit instruments to work with."

Such were the wise words of Froebel, written perhaps half a century ago. Can anyone say that the standard he set up has been practically attained? Is it not true that people in general are still dominated, to a considerable extent, by the old idea that children are backward in their education unless they begin to learn from books when they are not more than five or six years of age? The reply will be made that the principle *is* recognized; that we have in the kindergarten an answer to questions of this character. It may be granted that the *principle* is recognized, and that kindergartens strive to apply it, but I think the qualification must be added that the recognition is chiefly limited to teachers, and the comparatively few kindergartens make little lasting impression as yet on the education of the total mass of children.

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[1] "Atavism and evolution," by C. Lombroso, *Contemporary Review*, July, 1895.

It is not the fault of the teachers that this is the case, but is due to the ignorance and blindness of the public, who are still in the bondage of the old traditions that children go to school to have their minds developed, and not their bodies, and time spent in the training of the latter is misspent and wasted. They cling to the delusion that the school possesses some supernatural power, by means of which natural physical processes can be reversed or abandoned, and the child forced to do mechanically in the school what no earthly power could accomplish outside of it.

In these days of child-study by psychologists, and the discussion of physical training by specialists in that profession, it might at first sight seem that I underestimate the progress made in the education of children. I should be sorry to give a wrong impression, for I think progress has been made, but it is still too much in the theory and discussion stage, and the schools receive too little appreciative support from the public, largely from the ignorance of which I have already spoken. Very much yet remains to be done before any of us, especially parents, clearly comprehend what the early education of the child demands in the way of physical training, and before we have sufficient courage of conviction to practically make use of such knowledge.

In early life, it must be remembered, the child learns by muscular, and not intellectual, observation. Objects can best be understood by actual contact with them, and seeing them used. If the infant could only have his own education carried on by the methods which he used at the beginning of life, he would often be a much stronger individual mentally, than when he is taught by the more empirical method of parents and schools, which aim at results, without due regard to causes. The infant accepts nothing on trust; he must know what things mean; what they are for; how they feel. They must become part of himself, as it were, and have no dim, vague, uncertain meaning. He rejects everything which does not in some way further his ends; that is, he must see the utility of what he does, as bearing on his object. He has the advantage over the ordinary adult, of knowing what he wants, and he takes the most direct path to get it.

The infant, strictly speaking, is a scientist pure and simple, for he proves all things, and accepts only those which are of direct value to himself. If he could lay out his future education, no doubt he would continue to pursue the direct method of self-instruction, and have a thorough and intimate knowledge of such subjects as he undertook to investigate. But alas! he is obliged to submit to the caprices and eccentricities of a system of education which assumes that he came into the world with a well-developed body, and mental and moral faculties, able to assimilate about anything the adult thinks he should know.

This sudden interruption of the process by which he was slowly, but normally, developing, breaks up that logical continuity of thoughts and ideas, and the resulting power of concentrated attention, which he would have ultimately acquired. He loses his place, as it were, in the book of nature, which he was laboriously reading, and is taken further and further away from a proper realization of himself, from what things mean, and what his relation is to them.

If he could progress as he began, he would go no faster than he clearly understood what he was about, and would not slide from one thing to another by some obscure rule of thumb, learning little by the way. Such knowledge as he had would be moderately sure, fixed, and ready for use. He would intelligently appreciate and employ the adaptations of means to ends, and would have an unconscious, but satisfied confidence in his capacities.

I suppose we are all willing to agree that the true object of education should be the formation of character and the making of good citizens, morally, mentally, and physically. But in practice we are still apt to forget this, and act on the theory that it is the acquisition of knowledge. If we do not forget it, we regard it as a remote end, secondary to other ends, and with a moderate degree of attention, pretty sure to take care of itself. The test of the method pursued is: how much does the child learn, and not, how thoroughly is he in all ways being prepared for life.

That the tide is turning, and many educators, and a portion of the public, are beginning to have a clear appreciation of the true meaning of education, I have no doubt, but there is still far from being any correct comprehension of the underlying foundation of all education, life itself, namely the correct training and development of the body.

We have long recognized the fact, psychologically, that habit was largely responsible for correct, or vicious, methods of mental action, but it has only been within recent years that we have begun to realize the dependence of mental action on physical habit. Some of the recent advances in the knowledge of nerve tissue demonstrate very strikingly that all nervous action, from the highest to the lowest, is the result of *habit*. We have now what seems sufficient evidence for believing that each nerve cell, with its processes, constitutes a concrete unit, or a nervous system, so to speak, by itself.[2] No cell exists without processes, but no cells, or their processes, have direct connection with any others. Such an arrangement of nervous matter allows a plasticity far more extensive than we had hitherto suspected, and raises the question as to how the nerves, with their processes, became so interactive as to finally perform certain special functions together. "Habit" is, in a word, the answer to this question; "afferent habit" is the origin of special function in these nerve units, or "neurons," as they are called. "In time, habitual impressions, followed by corresponding habitual reactions, became opposed to non-habitual impressions, and thus give origin to the great function of inhibition, without whose constant influence no permanent organization would be possible."

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[2] "Relation of the cerebral cortex to sensation," by W. H. Thompson, M. D., *Journal of nervous and mental diseases*, June, 1895.

The plasticity of the brain cortex for acquiring function is shown by the acquisition of speech. "This function is located in only one hemisphere, evidently through habit alone, determined in the first instance by the greater use of the right hand in gesture language. The corresponding areas in the other hemisphere, not being used, remain functionless in this respect."[3] When a child learns to use its hands or its feet, it may be developing areas for sensation and motion which were not originally endowed with those functions. Dr. Thompson closes his carefully prepared paper by quoting these words from Waller: "We thus picture" (referring to foregoing remarks on experiments on monkeys and dogs) "the cortical organs in a semifluid state of differentiation, still variable by new instruction, rather than a petrified and invariable collection of specialized organs tied down to particular functions."[4]

The function of *inhibition* which has been spoken of in these remarks is of such importance, and is so often referred to in scientific works, that I think it desirable to make its meaning clear, in this place, for the benefit of those to whom hitherto it has been a rather vague term. Dr. C. P. Bancroft several years ago wrote an interesting article on the attitudes of the insane,[5] in which he very well defines inhibition "as a *restraining power* which is implanted in the mind, and incorporated, as it were, in the nervous mechanism of the individual." Once firmly fixed in the nervous organism, it acts almost involuntarily and habitually on presentation of the proper stimulus. It is exercised in a twofold manner: *first* in checking irrelevant trains of thoughts, or what is not pertinent to the subject engaging the attention; and "*second*, in checking certain muscular movements, which, though they naturally succeed the stimulation that has preceded them, still for the time being and with other objects in view, are out of place."[6]

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[3] Op. cit.

[4] Op. cit.

[5] "Automatic muscular movements among the insane; their psychological significance," by C. P. Bancroft, M. D., *American journal of psychology*, February, 1891.

Whether we have, as yet, fully reached a satisfying physical explanation of inhibition, is a question outside the purpose of this paper. It must be regarded as a *result* to be achieved by the development and cultivation of correct habits. The part it plays in the mental and physical health of the individual cannot be overestimated. If the object of general education be to develop the "power of suspending *judgment* in the presence of an emotionally exciting idea," as I believe has been said by Professor William James, the object of physical education must be to develop the power of suspending *action* under conditions of untoward, or unusual, *muscular* excitement. In reality we are always on the road toward getting control over the functions of mind when we are training and disciplining the body. Every time the brake of inhibition is put on to slow down, or regulate over-hasty or unsteady muscular action, a gain mentally has been made. Professor Royce has well said that "there is no thought which does not tend to run out in our muscles or action. Self-restraint is as much conduct as self-direction. Education makes a man's reflexes into character, or system, or conduct. There is no thought without some group of sensations."

In alluding to the wonderful plasticity of the nervous mechanism, my object was to call attention to the opportunities, here presented in a stronger light than ever, of influencing, guiding, and molding cerebral and resulting mental development, by efforts made from without. Here are extensive territories of nerve matter, unused and unorganized, capable of growth and progress. Let habits be formed in any direction, and they become a part of the permanent nervous equipment,

[6] Op. cit.

which can easily be added on to, and more and more fixed, for as Carpenter has well said, "Our nervous system grows to the modes in which it has been exercised." We must never forget that bad habits are even easier to form than good ones, which can only be developed under conditions of persistent and prolonged training. These conditions, it may be said in passing, are not easy to create and maintain at the present time, when the social atmosphere is somewhat devitalized by a tendency to luxury, ease, and self-indulgence, and physical weaknesses are not overcome by sterner care and discipline, but palliated by enervating pampering and coddling.

Assuming that we have reason to believe that the mature life of the individual depends, or may be made to depend, very largely on the kind of physical training or education he receives in his early years, the question that confronts us is: How can we best apply these ideas? Before we can do this very intelligently, I think that we must have a more exact knowledge of the physical data of childhood and youth, and this can largely be accomplished by adopting a system of bodily measurements and observations. For instance: the height, width, diameter, and circumference of the head can be measured, and a record made of anomalies of the ears, eyes, nose, skin, hair, palate, and teeth. Facial expression and cranial asymmetries can be noted. A few measurements can also be made of the limbs, special care being taken to record errors of co-ordination. In addition, some of the "nervous signs" detailed by Dr. Francis Warner of London may be looked for, and finally defects of nutrition described.[7]

The objection will at once be made, that such an examination will require far more time than any persons at present engaged in the education of children have at their disposal. It may be said in reply that much less time would be required than superficially appears. In many children there would be little, if anything, to record, and in those remaining, not more than fifteen or twenty minutes need be required, on the average. But how can time be better spent, I would inquire, than in determining in what way a child is defective? So far we have been guided too much by tradition in estimating bodily defects, and have never learned with any degree of accuracy the connection between these defects and mental weakness. What we are destined to do, when we have perfected our methods of observation, is to forecast the child's mental future from his present physical condition. And what is still more important, and worth all the effort and time expended (and this will answer more fully the question about the expenditure of time), we are to learn how to influence and modify that mental future, by efforts to overcome defects existing in the present.

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[7] In suggesting such a plan as the one outlined, I do not mean to ignore the observations which have been made, and are being made on children by scientific investigators. My object is to put something, as it were, directly into the hands of the teacher, which will make it easier to understand the child, and the kind of education he needs. Incidentally statistics may be gathered, and deductions grow out of them, but such is not the primary purpose.

To bring about a result so promising in its benefits to mankind, I hold that we must educate public opinion so that there will be in general a clearer and more definite, and I may say, easier comprehension of what a normal, and what an abnormal, child is. And the first step in this direction must be a closer and more intimate knowledge, on the part of the teacher, of the simple anthropology of the child. This cannot be acquired in a reliable way by haphazard or hasty observation, but by the use of instruments of precision, carefully thought out methods, and cumulative experience. In the end a physiognomy of defect will impress itself on the mind of the teacher, which will be of immense benefit in aiding to develop the discriminative capacity to determine how to deal with children as individuals, and not averages.

The primary object of such a series of observations, as I here suggest in outline, and which I assume would be made at the earliest school age, would be to determine, as precisely as possible, what form of education or training the child was ready for. In some cases he would be found, perhaps, too immature and infantile to leave the nursery. In others he would be able to enter the kindergarten; in a third class of cases he would be found too undeveloped to take more than the simplest exercises in the kindergarten, though he might be even six or seven years of age. A fourth class would be composed of children unable to do anything in the kindergarten, and hardly able to go through the most primitive exercises.

The grading of the different kinds of children having been once accomplished, the problem would be a simple one, and would be largely reduced, in the latter two classes at any rate,— for I am not discussing the kindergarten system,— to a consideration of the question of how best to train them physically. Such a training no doubt would begin with attention to food, dress, bathing, etc., and would at the same time very carefully and slowly seek to develop the large muscles of the trunk, arms, and legs. Next in order would come the hands and feet, the mind not being much called on at the beginning. The fingers of these children would be under- rather than over-trained, but the hand in general would receive the most watchful care. What it did it would learn to do thoroughly and well; and in the same way the feet would be drilled until they began to respond accurately and quickly to what they were called on to do.

The plan of training here suggested is similar to that advocated near the beginning of this paper; that is, it is the one Nature would follow herself in the education of the child. He would get his first lessons in translating the meaning of things in the world about him; it would be through the use of his hand, through the sense of touch. In the healthy child the rôle the hand plays in mental evolution is somewhat masked by the general harmonious action of the entire organism, so that one part does not stand out conspicuously superior to another part; it is therefore instructive to turn to the education of the idiot, if we wish to understand the importance of the training of the hand.

In the idiot the hand is almost always abnormal, or to use the more common expression, anomalous. Seguin[8] has

[8] *Idiocy; and its treatment by the physiological method*, by Edward Seguin, M. D.

described the hands of idiots as being too short and clumsy or spindle-shaped; fingers truncated with unfinished nails; thin and glossy, like quills, with little pearly nails; articulations so stiff they can hardly be moved, or so loose that they can hardly be fixed; tissues bloodless, or darkened with stagnant blood. Yet these hands, poor as they are, Seguin calls the "organs of prehension," and adds that "their incapacity puts a barrier between the idiot and everything to be acquired."

To educate the idiot's hand takes unlimited time and patience, for it is often nothing more than a block of wood, yet it can be and is trained, little by little, until finally, through its intelligent action it reveals to its unfortunate possessor something of the meaning of his environment. The results that such training achieves lead Seguin to exclaim in a fine burst of enthusiasm: "The hand is the best servant of man; the best instrument of work; the best translator of thoughts. The most skillful hand is yet, in respect to certain realizations, as it were, idiotic; our own hand shrivels before we suspect the thousands of ideas it might realize."[9]

The time spent on training the idiot's feet and legs is also very considerable. As he fails to understand the meanings of things he touches until his hand is trained, so he fails to be brought into other relations with the world, until he has some control over locomotion, and can stand firmly on his feet.

All this kind of training of idiots has a deep significance, for it shows how much can be done with a slender capital of muscular force, carefully and rightly developed by degrees, over long periods of time. No demands are made on the idiot's mind at the beginning, because he practically has none. The lesson which this should teach us in the education of dull, slow, and defective children, as well as children in health, should be to train the body first; approach the mind through the hand, and wait patiently for results, which will pretty surely follow.

Once more, and as my concluding word, I would urge a deliberation in the early mental education of children, especially in the case of the slower and duller ones, for they are slow to overcome or outgrow defects. We must get over the idea that they should be ready to enter certain grades of schools at certain ages, if as now all are to be taught together, for the defective ones may be years behind the bright ones. The best chance of all is not to be hurried, for the bright ones will learn all the better in late years for prolonged, early physical training, and the defective ones will only tend to develop their inherent weaknesses without it. When the time comes that we give such training its full value in general education, we shall see evolved a better type of child, and an improved average of mental work.

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[9] Op. cit.

To recapitulate: the effort has been made to point out, first, that the importance of physical training in childhood is not as yet sufficiently recognized. Second, that if the natural method were followed, the body would be trained before the mind, in the early years of life. Third, that recent discoveries in the structure of nerve tissue show an almost unlimited degree of plasticity. Fourth, that the special functions of nerves and nerve cells largely is the result of habits formed from without. Fifth, that inhibition is the chief factor in regulating brain action. Sixth, that on habit depends mental, as well as physical development. Seventh, that to apply physical training to greater advantage the teacher must have a clearer idea of the physical data of the child, which can be acquired by a system of simple anthropological observations. Eighth, that such a system would lead to a more careful grading of children at the beginning of school life. Ninth, that it would further lead to the natural method of developing the child, by beginning with the training of its large muscles, and gradually working up to the hand. Tenth, that the idiot furnished the most striking evidence of the dependence of mental development on physical training. And eleventh, that capacity, and not age, should determine when and how to begin the child's education.

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VI

DISCUSSIONS

A DEAF CHILD OF SIX

More than twenty-seven years have passed since the deaf and dumb began to speak in America, and since that time every year has shown a gain in the methods employed in teaching the deaf, no longer dumb, the use of speech. A very interesting phase of this work is the teaching of very young deaf children, babies yet in the perambulator, first lip-reading and later speech itself.

The case of a child, now six, who is personally known to the writer, seems interesting enough for publication. The child was born deaf, and, until he was two years old, was treated exactly as any other child is treated, because, until that time, his deafness was not known to his family. When it was known, a teacher was given him instead of a nurse, and this teacher, while performing nurse's duties for eight hours every day, used every art in her power to make the child look at her lips. Everything she did she talked about. Everything the child did she talked about. Everything the child wanted she talked about before she gave it to him. Little by little the child learned to watch for and expect the movements of her lips which he found to be the unvarying accompaniment of work and play, food and rest. After a time he began to perceive that the motions were not all alike, that when his warm milk was coming the lips did not shape themselves in the same fashion as when sleep was expected of him. So, bit by bit, as any other baby learns to understand what is said to it long before it can talk, this deaf child was taught to understand many ordinary words and phrases, and day by day he grew into the knowledge that the ordinary means of communication among human beings is speech.

At three, then, the child knew that people talked, and had acquired the habit of watching them while they talked. Just how much he understood at that stage will never be known.

From three to four he had no regular teaching, but his family talked to him incessantly, and he watched them.

When he was four years old a regular teacher of articulation came into his home and taught him. His progress was marvelous. He learned that all things in the world have names, and it seemed as though he would never be satisfied until he had learned them every one. "What is that? what is that?" he said all day long, and "Where? where? where?" *Where* was the first question which he learned, and he made it do duty for all questions. "Where?" with him meant "Why?" and "What is that for?" and "Tell me about it."

In four months' time he had acquired sufficient use of speech to receive stories from one person and tell them to another person with sufficient intelligibility to make himself understood when the subject-matter was unknown to the hearer. He did not use sentences, only words and phrases somewhat in this fashion: "By and by Christmas;" "Papa, give sister doll;" "Papa, give brother gun;" "Papa, give mamma pin;" "Papa, give baby [himself] boat." The teacher, in telling him facts, used ordinary, simple language; neither abbreviating nor lengthening sentences, nor moving her mouth unnaturally. It is not meant by this that she simply talked to him; on the contrary, she *taught* him constantly and after the most approved methods, but always with as little divergence as possible from the lines followed in the education of hearing children.

At the end of ten months the child had a usable vocabulary of six hundred words, and understood many more than that when they were used to him. Adverbs and prepositions he used very little, pronouns not at all, but in various ways he showed that he understood them when others used them. He made no sentences himself at this stage. He conveyed ideas by means of words, that was all.

When he was five he went to school,—a school for the deaf,—and continued to have private instruction at home. Early in this, the sixth year of his life, and the second of his instruction, he began to make sentences of his own accord and to use words which had never been taught to him, but which he had picked up in his intercourse with his family and friends. He learned to read, too. The year before he had learned to recognize written words, but this year he learned to find pleasure in written and printed stories, although he never cared for them until they had first been told to him by word of mouth. A remarkable fact about his reading was his remembering new words. If, in his conversation, the need for a certain word came, he could invariably select the right book and turn to the page where he had seen that word used. For instance, when he came across the picture of a storm-beaten ship, and could think of no word to express his thought concerning it, he hunted up a book containing hundreds of monosyllables arranged according to sound, and turned the pages until he found the word "wreck," whose meaning had been hurriedly explained to him *once*, weeks before, and announced, "The ship will be a wreck."

It is impossible to say how many words he used at the end of his second year of instruction. Some idea of the amount of language he understood, and of his power of lip-reading may be gained from these topics, which were used in oral conversation with him: Balloons, caves, grizzly bears, the Rocky Mountains, Esquimaux, polar bears, icebergs, palm trees, monkeys, camels, the desert, Africa, crocodiles, black men, Indians, campfires, the State House, policemen, soldiers, Memorial Day, Fourth of July, battles, ships-of-war, whales, etc. These are taken at random, to show the ground covered and the sort of subjects which interested him.

The child is six years and some months old now. He reads and writes and talks, plays games and asks questions. The business and the pleasure of his life are carried on by means of speech and lip-reading. He uses no other means of communication than speech in his intercourse with his little world, and feels the need for no other. If he wants to know the reason for anything, he looks to someone's lips for an explanation; if he wants to communicate a thought, the thought shapes itself to spoken words—spoken words which are intelligible to the members of his family and to his immediate friends. His voice is so low and soft that strangers find it hard to understand him, but this difficulty will disappear as he grows older.

Now this child belongs to the class ordinarily styled "deaf and dumb"—that is, born deaf, he would have been dumb without the speech which has been mechanically taught to him, and the language which has been built up for him, word for word, unaided by the sense of hearing.

This, the last decade of the nineteenth century, has many wonders, and this matter of the "dumb" talking seems worthy to be classed among them.

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LANGUAGE READING FOR COLLEGE PREPARATION

We hear much of unity and uniformity in secondary education. In certain directions this uniformity is a great desideratum, but we should not raise (raze?) all things to a dead level, kill individuality, and deaden inborn talents possessing a bent of their own. The uniformity we need most is that of quantity and quality of preparation, as tested by the acquired ability for additional conquest.

Why does one college set for the entrance examination of 1896 *A winter's tale*, and for 1897 *As you like it;* while another college sets *As you like it* for 1896, and *A winter's tale* for 1897? In German, why should one college demand a hundred pages of a particular text of Grimm, another a given number of pages of a specified reader, a third a portion of some other text, and so on, *ad libitum?* This is certainly inconvenient for schools preparing for various colleges. But even with uniformity of date and text in all colleges, we should not be satisfied; for why should the instructor not be allowed to select his own texts of the prescribed grade of difficulty, and his own date for reading them? To some it is worth much to be free. The college will, of course, indicate the kind and the amount, and the teacher that is not independent, from lack of knowledge either of different texts or of the subject, will follow the printed instructions to the letter. But why not allow substitution to those desiring it? What possible difference does it make to the college professor of modern languages who asks for *Wilhelm Tell*, whether the pupil reads *Wilhelm Tell* or the *Jungfrau von Orleans*, or *Maria Stuart*, or *Wallenstein*, or *Nathan der Weise*, or *Minna von Barnhelm*, or *Egmont*, or *Iphigenie*, or *Faust*, or any one of a dozen other works that might be mentioned? And as for ordinary prose, why say that the pupil *must* read fifty pages of Buchheim's *Reader*—good as it may be—but that two hundred pages of anything else, even though more difficult matter, will not be accepted as a substitute. Indeed, we need uniformity in college requirements, but we want that uniformity exhibited in the liberty of choice as to what text we shall read. Set the grade of difficulty and the amount to be well covered, but if the individual teacher wishes it, and is capable of judging, allow him substitutions. One finds, to be sure, reading matter that, with beginners, seems to work better than any other. But after the ground is broken, after some proficiency in translation has been attained, the field is almost unlimited, and the progressive, self-dependent, growing teacher reads different matter each successive year. In doing so he does better work; for he is more interested in what is before him. The same principle holds in Latin and Greek, though to a lesser degree, since the field is limited. If he is preparing pupils for institutions that allow no substitution, no change, the Latin teacher is truly an object of commiseration, bound hand and foot, a slave to *Cæsar*, and compelled year after year to pass over the same ground and gaze upon the same dry bones. The work of the secondary teacher is so exacting in mental strain, care, and anxiety that few, unless they make it count in the classroom, have either the time or the inclination for outside study and improvement. New reading matter, then, becomes with them an absolute necessity.

This brings me to the consideration of the entrance examination itself. In English, the chief reason for setting particular works for particular years is doubtless for convenience in making out the question lists. But even this reason will not obtain for foreign languages. Genuine sight reading may and should take the place of passages on set reading. I say *genuine* sight reading, for many colleges state that the test will be sight reading—that is, sight translation—and thus apparently allow substitution; but the examination papers show that passages are offered always from the works mentioned in the catalogue, which means that it is not sight translation at all for those that have taken the reading suggested for that particular college. In this case a pupil that has spent his time on only fifty pages may put in a better paper than one that has read five hundred pages without the specified fifty. There is no comparison, however, between the two in their ability to do advance work. This is an important factor in the right method of language teaching. New reading is of greater value than the one text often reviewed, for in repeated reviews the mind is not so alert, and less effort is put forth. Reviews are more for the poor student than for the one that excels. But the poor student will average just about the same on review as on advance, and will work with perhaps a greater loss of energy than the good student, who does not need the review, and therefore is little benefited by it. Latin and Greek are not exceptions to this rule, and I am pleased to see that there are those that are of the opinion that, without increase of hours, three times as much reading should be done in Latin as is done at present.[1] In my opinion, more power is acquired by reading the twelve books of *Vergil* once than by reading the first six books six times. Yet I believe in one review to clear up doubtful points and to obtain a comprehensive view of the work as a whole.

Again, who is better fitted to judge of a pupil's preparation to enter college and continue work with his fellows, the teacher that has taught the boy for four years, and knows his whole history—faithfulness in preparation of lessons, punctuality in attendance, ability to do solid, though perchance not brilliant, work—or the reader of an hour's test, in which are all the elements of luck and chance? What, in fact, is the aim of methods and study in a school preparatory to college? Is it to prepare the pupil to pass an examination, or is it to develop and strengthen him so that he will be able to do his work well after he is actually in college? Surely, to pass the entrance examination is not the *summum bonum*, nor should it be the chief end in view. But, if the examination can be set on real sight reading of the proper grade of difficulty, the result will mean something, and combining with it a certificate from the fitting school, stating time of preparation, texts read, amount of exercise work and grammar study, and scholarship as shown by the grade attained, the examiner will have data from which an almost infallible decision may be reached. In the other case, with set work, what teacher preparing pupils for college has not known of a fairly good student's failing, while the drone of the class, the very boy that is so far snowed under as to be requested to repeat the year, if he continue in the school, chances upon one of the few passages he knows, and passes a fair examination? Justice comes later to the unworthy boy, but an irreparable injury has been inflicted upon the faithful but unsuccessful one. In a sight test, too, the lad devoted to illegitimate helps, to translations, and to keys, receives his reward.

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[1] W. C. Collar, in the *School Review*, January, 1895.

The reply to all this will be that the college must protect itself against poor teachers. So it must; but a judicious use of this method, with the proper safeguards and the power of rejecting where experience or knowledge of circumstances shows it to be advisable, will prove as effective as any system yet devised for sifting the qualified candidates from the unqualified.

Then give us uniformity in the minimum amount to be performed, and uniformity, as nearly as possible, in quality and in degree of difficulty required, and uniformity in minimum time of preparation, but give us freedom in choice of matter, and in methods enough freedom for the display of individuality. In the meantime, *faute de grives, on prend des merles.*

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IS HISTORY A SCIENCE?

Can history be a science? In the first place let us agree upon a definition of science. It is the investigation of nature. Nature is the physical as standing over against the ideal. The material with which science deals is physical phenomena. "Nature and History," says Droysen, "are the widest conceptions under which the human mind apprehends the word of phenomena." The method of science is experiment and analysis. The spirit of science is to sit down with the object, the sense-fact, and hear its story to the end, then tell this story in causal order—adding nothing, omitting nothing. The story thus related is a science, perfect and complete. The pith of the scientific spirit is its objective character, the absence of purpose as well as all coloring of individual feeling. The scientist takes a measure of water and the analysis showing hydrogen and oxygen, his report is the bare formula, H_2O. This is a perfect piece of work.

Is the material of history like in kind to the material of science? Does it yield to the method and spirit of scientific treatment? "Historical material," says Droysen, "is partly what is still immediately present, hailing from the times which we are seeking to understand (remains), partly whatever ideas human beings have obtained of those times and transmitted to be remembered (sources), partly things wherein both these forms of material are combined (monuments)." Manifestly the "remains" of a period are not the life of that period. That life is gone. Nor can we call it up again. That life did not grow from the "remains" present to us, hence we cannot, starting with these "remains," ascend back into that life. The original did not grow along this backward line. It is clear that the "remains" from a period do not stand to the life of that period as hydrogen and oxygen stand to water.

The next material of history is "sources." These are accounts of the life of a period, generally from eye-witnesses. Here we get nearer to the facts. We have a picture, not the remains, of a period. But the description of life is not alive. No analysis of a picture will find in it the elements of the life. We put into a picture all that we see in it. Thus in "sources" we have only that which the writer was able to understand of the period, not the period itself. We are twice removed from the period; we construe the construction of our author.

In the "monument" we have only the dead symbol of a period. The full, rich, struggling life is gone utterly.

It is now clear that the material of history is different in kind from the material of science. And we can appreciate the confession from the Harvard professor, "After all it is the power of arranging and combining his material which makes the great historian." That is, the work of the historian is not analysis, it is construction. The very heart of the scientific material is its objective character; it tells the one story, H_2O, to every human mind. On the other hand, the glory of the historical material is its subjective character. In every case it is that which had significance for men. Of the thousand deeds of a day not more than one passes up into history. Why is the one chosen and the thousand left? They were all genuine events; but one only had meaning for the historian. The material of history is the product of men. And the historian in every case selects from these products.

This brings me to consider the method of history. Can it be the method of science? The method of science is experiment and analysis; the method of history is investigation and construction. The method is determined by the material. And the material of history is human throughout—that is, it is subjective, and therefore individual. The historian never reaches an analysis, his result is always an interpretation—and an interpretation is a mental construction, a mental construction is colored through and through with the individual. The experience of the interpreter is the only light in which the event can be seen. We can get knowledge only by using the knowledge we have. We must use our own words, our own figures, our own system of thought, and we must look at the event from our own point of view. The "pure objective fact" is unknown in history. In no case can a man give attention to that which has no meaning for him; but it is no part of the original that it has meaning for me. Its meaning for me is a new event. "Meaning" is relation to experience. And since the experience varies with the individual, it follows that no event in history can ever mean exactly the same for two persons. This is an accepted fact in psychology. It is called the doctrine of apperception. Here we find an explanation of the fact that a Romanist and a Protestant will read a page and draw opposing conclusions. Neither makes an analysis; each takes from the page whatever has meaning for his system. Says Droysen, "In every case, however fruitful the investigation may have been, ideas arrived at by its aid are far from reaching the fullness of contents, movement, manifestness of forms, and of real energy which the original things had when they constituted the present." Further, "It is only in appearance that the 'facts' in such a case speak for themselves." It is now clear that the method of history cannot be the method of science. It is impossible from the standpoint of psychology.

In the third place, the spirit of history is not that of science. It is true that Ranke has laid down as the first essential in an historical work "that it be true, that is, that the things be reported as they are," and Hebbel has said that the highest art of the historian is "to reproduce the atmosphere of the time"; but I have shown that Ranke's "essential" can never be. Things cannot be "reported as they are"; they can only be interpreted so far as they have meaning for the interpreter. The report of life can never be the life itself. The historical spirit must not attempt the impossible. Its center is not the "pure objective fact." To quote Droysen once more: "Then surely he would have had to recognize that not past events, not the infinite succession of 'facts' which constituted them, now lie before us as materials for investigation; that instead these facts vanished forever with the moment to which they belonged, and that, as human, we possess only the present, the here and now, with the impulse and ability, of course, by learning, insight, and will, to develop immeasurably this ephemeral point." The spirit of history is not the spirit of science.

History is not and can never be a science. Theology took history within itself; the result was confusion and barrenness. Then philosophy assumed the guardianship; the result was death to history. Now science is claiming the privileges; the result is a fearful loss to our culture. Just as life was deprived of all physical comforts so long as science was theological and philosophical, so our culture must suffer heavily so long as history is under the control of science. Let history be history, and let science content herself with her own material. What, then, is history? We must see first that it is not a science. Then and only then shall we learn what it is. And this is a problem for the historian rather than the psychologist.

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ARITHMETIC IN THE REPORT OF THE COMMITTEE OF FIFTEEN

The great debate which followed the presentation of the Report of the Committe of Fifteen seemed to have developed into an unfortunate dispute upon the philosophical dogmas of its authors, and to have ended in a quarrel as to which of two foreigners had the better system of philosophy, Hegel or Herbart. It will certainly be a misfortune if the Report is to be disposed of upon the general grounds of philosophy. We pedagogues of the schoolroom have learned by experience that, while the war of opposing philosophies is going on in the clouds, much of their common munitions of war, which are left lying around loose upon earth below, is frequently of value to us. It is to be hoped that the noisy disturbances of this war cloud will not frighten us camp followers from the Report itself.

The influence of the Report upon the subject of arithmetic is an interesting problem. We all know, without being philosophers, that there is something radically rotten in the state of arithmetic and of mathematics in general in the elementary school. It is a pedagogical skeleton in our family closet, and we do not care to open the door more often than necessary, owing to the disagreeable odor of decay which ensuingly pervades.

The Report mildly suggests that the time allotted to arithmetic should be curtailed—a suggestion which, if age, as in the case of wine, enhances the value, is certainly a golden one. The suggestion, reasoning from the custom of its ancestors, implies that the plan forthwith submitted will reduce the time of servitude in the arithmetical treadmill from eight or nine years (with no visible results) to five years (with a plethora of results).

I do not believe it, for I do not recognize in the system proposed one at all at variance in essential principles with the existing system; and the Report does not touch the vital issues of difficulty and dispute. I do not believe it because the majority report, as a mathematical document, is unquestionably scholarly and rational; yet, as a pedagogical document, applicable to pupils from five to fourteen years in the elementary schools, the Report cannot but appeal to those familiar with children's difficulties and conceptions, as missing the point. Its feet do not touch the ground children walk on. But this is a principle, it is to be inferred from the discussion, that is admitted to a great extent, of the whole Report. Dr. Harris himself offered the very valid argument that education cannot be determined wholly from the standpoint of child-study; some attention must be paid to other considerations, notably the world of environment. But while the argument may be valid in certain cases recently put forward, it is not one behind which the majority report may take refuge in the case of arithmetic. Arithmetic is not a new study. It has not been subject to the tinkering tendencies of child-study. It has been the subservient slave of considerations external to the child for centuries. Amid all this firing of salutes over this newborn infant, child-study, no one has yet dared to allow the baby to play with arithmetic. The sacred dust of tradition upon its brow bears testimony to this fact.

The majority report cannot but cause the suggestion to arise that the author of its being has in some way got his telescope reversed, and is consequently reading the reflection of the arithmetic of his own brain projected upon the eyepiece, rather than the mathematical conceptions of children. "To count," says the report, "one drops the qualitative, and considers only the quantitative aspect." This definition is made the corner stone of the treatment of the subject, and with naïve simplicity the author proceeds, his definition being admitted as a foundation, to show how the child builds from it mathematical conceptions. This definition is not to be questioned as the definition of a certain mental state in the developed brain of an adult and educated mathematician. But it cannot be intelligently admitted that such a definition at all defines the process in the brain of a child from five to fourteen years of age. It is the result of years of mathematical training. The child goes through certain nervous processes in counting to accomplish, within certain limits, analogous ends to those of the mathematician of adult development; but it must certainly be admitted that the terms of expression, in the two brains, are essentially different in content. In the child's brain there is every reason to believe that qualitative mental images form a predominating feature; while it may be possible that in the mathematician's brain counting has not a qualitative content. The majority report, in limiting its discussion to that form of counting which has dropped quality and established quantity as an abstract conception, at once has placed itself without the sphere of childhood, with which it is supposed to deal. The report is a mathematical document, and as a pedagogical document, it is painfully suggestive of that justly famous treatise upon "The Snakes of Ireland," the preface of which contained the incidental observation that there are no snakes in Ireland.

The Report, in basing arithmetic instruction upon a foundation of number and quantity, certainly makes a very grave assumption. Arithmetic may be merely the science of number in the adult mathematician's brain. To assume from this definition that it is such in the child's mind is quite another matter. It will be later the attempt of this paper to show that arithmetic, as the term is used to designate a certain class of instruction in the elementary schools, has indeed very little to do with quantity, and that quality and language are the real difficulties with which the child has to contend.

The weakness for basing the treatment upon hard and fast definitions seems to be the general tripping stone of the Report. In a similar way algebra and geometry are defined in the fixed terms of mathematics, and the treatment thereby lifted from the field of discussion. To infer from remarks which leak out in the reported debate, it would appear that the authority of dictionary definitions has been relied upon for many of the essential conceptions of the report. Dictionaries cannot be relied upon for their face value in handling matters of development. No dictionary of children's conceptions has yet been compiled. We must be permitted to use terms of adult use flexibly, otherwise disputes will arise as unprofitable and as fatiguing as those which have attempted by definitions to determine whether a child reasons or an oyster thinks.

If there were any possibility of misconception of the pedagogical notions which underlie the Report, the following description of the process by which the child thinks five-sixths, dispels it, "In thinking five-sixths, he [the child] first thinks five and then six, and holding these two in mind thinks the result of the first as modified by the second." In a developed brain this is a possible way, but it is more than likely that if the manner suggested be actually tried with a child the result would be his apprehension of the figure "5," the figure "6" underneath, and a line between them; simply this and nothing more. The child lives in a world of sense, and this is the way his immediate senses would present it. To offer such a conception as a natural one to the child's mind is as reasonable as to expect to discover a discussion of the spiritual destiny of man in the seminal germs of protozoans.

I mean no disrespect to the veteran in educational progress who has presented this report. But it is certainly unfortunate that he has offered, under the sanction of his intelligence, a merely mathematical treatise which the educational world will naturally regard as pedagogical. It is especially unfortunate owing to the pressing need of a report by some authoritative body upon mathematics in the elementary school. The world has changed in its content, but the instruction in arithmetic has thus far received little pedagogical attention. Its ills are those of an old form in a new world. The considerations which have made it what it is have been quite foreign and external to the child. The form of instruction has been mapped out in plan and method by traditional adult conceptions, generated from the specialized brain of the closet mathematician, unshaped and unmodified by any pedagogical conceptions whatever.

That which a child should be taught in school is a ratio between what he will naturally learn, as determined by internal conditions of his development, and what it is profitable to teach him, determined by demands of his world of environment. There is work for a committee to determine the terms of this ratio in the matter of arithmetic, for the subject is evidently in a state of confusion, lacking clear theory, facts, definite system, and acknowledged ends.

Let us take a rough superficial survey of the matter, using as data the common and current texts and methods of instruction. Let us see if the report has really touched any of the issues where difficulty is superficially manifest. Let us see if quantity is really the problem with which pupils so vainly struggle for eight or nine years.

In the first place, the traditional grading of arithmetic instruction is not upon a basis of quantity. First come the fundamental operations, which indeed deal with counting and are soon mastered in some fashion; then we deal with wholes, and next with parts of wholes. The difference between a whole and a part, as it appeals to a child, is certainly qualitative, not quantitative. He will count halves of apples as readily as whole apples, provided he can see or imagine the halves clearly. The chief difficulty in the schoolroom, as will be later pointed out, is neither with quantity nor quality, but with confusing symbols of arithmetical language; and this is an affair of language, after he obtains clear mental pictures of parts. There is certainly nothing new introduced, as a matter of quantity, when we pass from adding three apples and five apples, to adding three-sixths of an apple and five-sixths of an apple, provided the child is made as familiar with the qualities of the sixths as he is with the wholes. Then we pass to denominate numbers, dealing with feet and inches, quarts and gallons, hours and days, etc. It is true that inches bear a certain quantitative relation to inches, but there is no ground in experience for the assertion that this is where the difficulty comes in. Nothing new quantitatively has been introduced. He has already dealt with problems about three rabbits and four rabbits in each pen. Has there been a new quantitative conception introduced, in changing the word "rabbits" to "quarts," and "pens" to "gallons," when we ask how many quarts there are in three gallons if there are four quarts in one gallon? The change is in quality and in language. The child must learn the qualities of a pint, gallon, inch, etc.; he must build up a mental picture of these objects in their qualitative relations, associate with them names of language which will call up these mental pictures, and then, as we all know from schoolroom experience, the problem is solved. In percentage and phases of business operations, again, no new ideas of quantity appear; three hundredths of a certain sum of money and five hundredths of it make eight hundredths, provided the child gets a clear qualitative image in his mind of the sum of money and its divisions; just as surely as three rabbits and five rabbits are eight rabbits, once he can picture the rabbits. This subject is difficult to him, for it is an entirely new world of quality to him, and it is difficult for him to form images; so it is with astronomy, for the same reason exactly. Quantity is no more an obstacle here than it is in acquiring a conception of the slopes of the Amazon valley in order to determine in which way the water flows. Passing now to mensuration, which has become incorporated in the term arithmetic, the difficulty is in associating relations of space. To find the surface area of a cylinder offers no difficulties, once it occurs to the child to lay out the surface as a rectangular plane. There are no new quantitative relations to be learned whatever; the difficulties are mainly those of quality in the matter of shape, and disappear when mental images in apperceptive relation are formed.

In short, before a child can become expert in exercises which go under the head of arithmetic in the school, he must—at least in mental imagery—learn to saw wood, dig ditches, whittle with a knife, weigh with scales, and do a general banking business. His main difficulty is with the qualitative considerations pertaining to the technique of these special occupations, and the accompanying language study in learning terms of quality. It is no wonder that it takes him a long time, for an adult generally spends his lifetime in mastering one of the occupations. Quantity is a matter which holds an infinitesimal place in the exercise which we call arithmetic in the actual school. It might be unkind to remark, in passing, that this view of the matter is favorable to the existing tendency away from the ancient dogma of formal discipline.

The field of real difficulty with arithmetic, as it is in the school, is in the preparation and arrangement of various qualitative elements so that they can be counted. Are there not grounds for question if quantity has any place in the elementary school whatever?

But our friends of the number closet may maintain that this work is not arithmetic, and may draw dictionary upon us in proof. But the fact stands that this mixture of qualitative work and language in their relation to numbered objects is what the school calls arithmetic, whether we choose to term it arithmetic or Choctaw.

Or do they who so loftily ignore all but quantity in arithmetic do so upon principle, maintaining that we are commencing at the wrong end of the matter when we deal with quality first? Do they maintain that the subject should be taken up from a conception of an abstract unit as a basis, and from this quantitative abstraction developed first a science of pure number, which we might thereupon turn about and apply to objects in their various qualitative relations? This is certainly a very taking suggestion and seductive theory. It has the exactness, system, and beauty of a mathematical conception. Moreover, this view is already deeply imbedded in our existing system, but in such an unsystematic manner that, even if it were admitted to be the right method, there is necessity of reconstruction. Many of the texts do indeed commence with the definition, "Number is a unit or collection of units." Manifestly there are two theories of procedure in the field, and it is nothing but reasonable to suppose that in an unsystematic, haphazard conflict in the minds of teachers, in texts, and methods of instruction both child and subject are sufferers. Shall we start with quality and deal with numbered objects, or shall we start with abstract number? There are two horses in one pasture and three in another; how many altogether? Shall we teach the child to drive the horses together, either in reality or in imagination; *see* that there are five horses; and then go about teaching him the arithmetical language to express this operation? That is one way and in one world. Or should we do the business in an entirely different world; commencing *ab novo* with the conception of an abstract unit, proceed by the *a priori* laws of thought, learn that two units and three units are five units—horses or no horses—and then apply these abstract units to the sensuous concrete, after having demonstrated the philosophical theorem of the universal validity of transcendental principles, etc.? This much is certainly manifest: there are, running out from every problem, two sets of reasoning processes, one into the objective world where quality is predominant, and one into the abstract world of pure number science where quality is not. And these two lines of reasoning run parallel throughout all arithmetic, the one ever duplicating the other at every point—to the delight and dispute of philosophers from Hume through Kant to Hegel and Herbart.

Let the philosophers fight it out upon whatever adult grounds they will. But what are we going to do about it in the matter of arithmetic in our elementary schools? What shall we do about it in the minds of children from five to fourteen years of age? Shall we train our children to hunt in the field of qualitative objects or in the world of abstract relations of still more abstract units? In which field *can* we train them? In which field *must* we train them?

The Report declares that common fractions should be presented before decimals. It is easy to see, from the adult standpoint of mathematics which is in the author's mind, his reason for this. The symbols are something more than mere language symbols of relations in the objective world, and bear in themselves a certain rational relation, mathematically. But it has not been decided as yet that this is even a possible condition of the child's mind. If we look upon arithmetical symbols as an expression in language of operations in the world of sense—as, in the absence of evidence to the contrary, we may assert the child must regard it—it is clearly a matter of indifference, whether we present common or decimal forms. Both are merely language forms. Five tenths of a dollar being placed before a child, he *sees* them, and it is now of no material importance whether we teach him the symbols of decimal or of common fractions.

Still, the mathematicians may be right, even pedogogically. It is a question upon which all of us will hold different views until the matter is thoroughly and intelligently sifted. I would simply point out the source and cause of many of the difficulties in arithmetic. A step toward systematic establishment of order would be the determination of the following:

1. Is it possible for children, five to fourteen years of age, to use intelligently the symbols of abstractions in the world of pure number science?

2. Is it possible to deal with arithmetic symbols in the elementary school merely referring to objective relations, and thereby accomplish all utilitarian ends?

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VII

REVIEWS

Systematic science teaching: a manual of inductive elementary work for all instructors—By EDWARD GARDINER HOWE. (In *International Education Series.*) New York: D. Appleton & Co., 1894. 326 p. $1.50.

This book includes all work in elementary science under four heads, viz.: (1) The stars and earth; (2) The mineral kingdom; (3) plants; (4) animals. These divisions indicate four parallel lines of work extending through a period of nine years. Each year's work represents a transverse section of all the lines, and the whole is presented in a succession of "steps," forty-nine in all, though only twenty-three of these are detailed in the book.

Mr. Howe is a successful teacher of long and practical experience in dealing with nature subjects with children, and in this book, which has grown up with that experience and out of it, teachers may be assured that they will find a great deal of much needed help. It has not yet dawned upon the minds of many, as it has upon the author, that a book entering this particular field must be planned along different lines from those followed by books designed to assist both teacher and pupils in more advanced stages, and after specialization has begun. It must recognize the fact that the child's experience, while varied, contains but few details. It presents itself to the child as a whole, and it is the function of instruction to guide the pupil in the analysis of that experience into related parts, as well as to enlarge it. Mr. Howe understands this as a teacher; as an author, he fails somewhat to give the point due weight.

The book may be fairly judged by testing it in the light of the principles which underlie the following points:

1. Selection of subject-matter.
2. Methods of presentation to the pupil.
3. Plan, involving
    - (*a*) Relations of parts of subject-matter to each other.
    - (*b*) Relation of thought-work to expression.
4. Moral bearings.

In the division relating to animal life, about one-half the book, the material selected is abundant and well chosen. The notes given on animal habits and structure, and the hints as to the essential points for study, are generally excellent. Under plant life, the gross structure and something of the habits of common plants are treated. About one-fourth of the book is devoted to minerals and the stars and earth. There are two sets of phenomena, however, of vast importance and of great interest to the child, those involving physical and chemical change, which receive but little attention, considering the scope of life-study outlined in the book. The study of soils, too, through which the great function of the mineral appears, is hardly touched.

In the author's detailed model lessons some excellent hints are given. There is throughout, however, rather too strong a tendency to emphasize form independent of function, and too much stress is placed upon classification. The point is illustrated by the lesson on "Seeds and fruits," Step I. The object is stated as (1) To see and handle wisely selected botanical material; (2) To exercise the senses, to give ideas of weight, etc., and to introduce color. In looking into the lesson through the method employed, that of merely sorting the seeds, the real botanical reason for the use of seeds seems to be to get the pupil to reach a classification based upon *form.* This being true, the lesson fails to have much significance to very young pupils, for whom it is intended, from the standpoint of botany. From the complicated mechanics of the lesson, it would seem that the author, perhaps, has most prominently in mind the training of the senses. *If* this is so, then, since the pupils are required to handle the seeds as *functionless* things, it follows that any other set of small objects would answer the same purpose, and thus again the aim of the lesson from the standpoint of botany is obscured. As though recognizing that the pupils will not see enough in the *botany* of the lesson, the author devises sundry games and offers certain rewards in order to keep them at work to the end. Judged by the mode of presentation, the conception which seems to underlie the plan of the book is that a child's mental activities develop in a serial order, rather than contemporaneously; and, that material of one kind must be employed at a given period to awaken one set of activities, and different material at a later time for another set. He speaks of the seeing of childhood; of the deductions of youth; the generalizations of maturer years. This conception of an epochal development of the mind is at the bottom of more bad science teaching than any other. Mental activities are not detachable from one another. Observation, as an educative process, cannot exist without appropriate deductions and the immediate formulation of a hypothesis. The teacher who continually preaches to his pupils, "Don't generalize," "Don't draw conclusions," "Make no hypothesis," is placing himself squarely against the mind's natural movement. The only point upon which pupils need to be warned is that the hypothesis must be held subject to instant modification in the light of new and further investigation. The author insists that in the earlier stages there be "no comparing, no generalizing." Utterly impossible! We know things only through their relations and these can be determined only by comparing. Although he wars against generalizing, yet in the very first year's work he selects certain animals because they are *typical* of large classes; in the second year he directs the presentation of *typical* leaves. But a typical form, a figment of mind, really, is but a *generalized* form; and by the continued and artful selection of these forms the teacher deprives the pupil of the chance to reach a true generalization by the correct process, which requires the examination of the greatest number possible of individuals.

The general tone of the model lessons is much impaired by that ultra-simplicity in questioning which has done a great deal to discredit elementary science work with both pupils and teachers. There is certainly scant reason for loading the book with such queries as these about a boy: "How many legs?" "How many arms?" "Has he a thumb?" "Has he a tongue?" The last two are particularly atrocious in every way. "Can boys hear?" "What with?" "How many ears?" "Can he see?" Similar ones might be cited in other lessons. In teaching how rain is produced, the use of the sponge in illustration is decidedly unfortunate. The air bears no such functional relation to the atmospheric vapor as the sponge does to the water it holds; nor is rain produced by the squeezing process which forces the water from the sponge.

By planning the work in a number of successive "steps" the book adopts the old *linear* method of treatment which practically precludes the possibility of psychological arrangement. The principle at stake, which is violated none the less because the line of advance is conceived to be "spiral" instead of straight, is that the child naturally sees wholes first. He does not see, as Mr. Howe has arranged the steps, the seeds of a plant when studied the first year, and the roots and stems the second; nor does he defer his observation of the flower until the seventeenth step in the third year. The seeds and other parts of the plant will possess significance for the pupil only when he sees the plant as a whole at that time. The significance of the different parts will constantly change, too, with the varying season. In autumn, they stand as an effect, each as a partial product of what the plant has done; in spring, they present themselves as a cause, each a factor in what the plant can do.

The four lines of work seem to be arranged without much regard for their organic relations. This is illustrated in the first year, where the topics "General aspects of the skies," "Sorting of metals," "Sorting of seeds, buds," and "Eight home animals," show but little connection.

The subject of expression does not receive that attention which its importance in nature-study demands. The chapter which attempts to develop the ideas of form and color in the child's mind without the use of the materials afforded by the science work is a decided anomaly. The author here seems to abandon in despair the suggestions offered in this direction in his chart at the beginning of the book.

In discussing the motive Mr. Howe well says that the great object is to have the children feel the "sweet influences which flow from communion with birds and flowers." His anxiety, however, to extract moral influences leads him to strain a point. For example, one of his motives for choosing certain animals is that they possess "desirable traits." In illustration, he says, in teaching about the spider he would emphasize her industry, but would ignore her bloodthirstiness. That is, he would have his pupils observe, admire, and applaud her dexterity in building her web, but would not allow them to be "in at the death," which is the inevitable and natural result of her industry. He says he would choose the harmless kangaroo rather than the tricky opossum. As an attempt to smuggle into nature-study a bit of morality, this artifice probably discounts anything the hoary old opossum ever dreamed of. Indeed, the anthropocentric idea is so strong in the author's mind, he betrays such anxiety to show that all creation is in accord with the notion of a beneficent design—beneficent from the standpoint of selfish man—that it warps his presentation in more than one instance. In one place the relation of the fly to the spider is slurred over; in another the relation of the cow to man is detailed at some length. He shows how the cow "serves" (?) man during her life by bearing his burdens; she then very accommodatingly submits to death that she may yield up every ounce of her corporeal substance to further satisfy some real or supposed want of her master—man. It would probably be instructive for both the spider and man if they could overhear the fly and the cow comparing notes. If nature-study can offer no broader claims to moral training, and if those claims do not rest upon deeper foundations than such as have been presented as leading ones in Mr. Howe's book, then the case is hopelessly lost. Genuine morality is not a matter of imitation.

The many valuable suggestions, however, which the author makes respecting material, its care and preparation, will at once commend the book to teachers, and time will see it occupy a useful place in every teacher's working library.

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Philosophy of Mind: An essay in the metaphysics of psychology—By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. New York: Charles Scribner's Sons, 1895. 414 p. $3.00.

It has recently been said by a distinguished American educator that this age in thought is as distinctly colored by psychological inquiry as the last generation was by evolutionary discussions. The kernel of truth in this somewhat exaggerated opinion has been fully appreciated by the author of the work before us, who published his *Physiological Psychology* in 1887, and his *Psychology, Descriptive and Explanatory*, early in 1894, and who now completes his psychological theory by a treatise on the metaphysics of mind. This third volume takes up for consideration "certain problems, suggested, but not usually discussed, in the course of a thorough empirical study of mental phenomena." These may be roughly classified under three heads: first the relation of psychology to philosophy and the place of metaphysics in psychological investigation; second, the existence and nature of mind; third, the relation of mind and body, and the several philosophical theories based on different views of this relation. Under the first head, a sharp attack is made on the many who, nowadays, attempt to construct their psychology entirely apart from metaphysical assumptions. This attack is conducted not only by way of theoretical contention, but also by means of examples drawn from the procedure of noted writers; and the conclusion is reached that each psychologist should either premise the metaphysics of common life, or else frankly adopt some definitive metaphysical system as the basis of his inquiries. The second main subject is treated in Chapters iii–vi, which are successively entitled: "The concept of mind," "The reality of mind," "The consciousness of identity, and so-called double consciousness," "The unity of mind." The argument for the existence and reality of mind is based for the most part on the direct testimony of inner experience, immediate self-consciousness guaranteeing mind in the present, recognitive memory revealing it in the past, and inference point ing to its permanency, though in a restricted sense. The identity and unity of the self are likewise the identity and unity made known by conscious life. For mind is not to be conceived in the old ontological way, as an occult and unchanging "core" of reality, which somehow stands "back of," or "under" its conscious states, but as a developing being that grows into unity through its own progressive life. Identity, in fact, can be predicated of a being only when "its self-activity manifests itself, in all its different relations to other things, as conforming to an immanent idea," and unity but implies "the presence of some ideal in the very being of the thing" itself. In the discussion of his third important topic, Professor Ladd returns to the polemic attitude with which his work began. Materialism is rejected as being practically out of court; monistic spiritualism is considered more defensible, yet not satisfactory—monism of the "double-faced unity" type is held, in favor of a moderate dualism, to exaggerate the parallelism of psychical and physical phenomena which modern research discovers, and to draw illegitimate metaphysical conclusions from any the most extreme view of the facts.

As a whole, the work is a timely and important addition to psychological literature. It is plain that psychology, of all sciences, can least hope to avoid the task of interpreting its results in terms of metaphysical conclusions; and Professor Ladd deserves high praise for his courage in attacking the problems which recent discoveries have brought into the foreground, as well as for his skill in solving them. The reader will, no doubt, find many points of disagreement: the close adherence to empirical results, though meritorious in the main, sometimes makes the author's conclusions seem merely scientific psychology rebaptized; the decided character of Professor Ladd's philosophy will repel followers of other systems. But, even if the work is not the last word on the subject, it is certainly a welcome and a valuable essay, as the sub-title modestly describes it.

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The Latin language. An historical account of Latin sounds, stems, and flexions.—By W. M. LINDSAY, M. A., Fellow of Jesus College, Oxford, Oxford: at the Clarendon Press; New York, Macmillan & Co., 1894, 8vo. 660 p. Price $5.00.

English scholars have of late years shown increasing hospitality to the best German work, and when a man of Lindsay's ability has compressed into one volume the result of learned investigation in Latin philology since Corssen's time, and has added thereto his own not inconsiderable contributions, one hastens to acknowledge the debt of gratitude. The book is well arranged, clear, succinct; a real treasure house of facts and theories concerning Latin philology.

Corssen called his great work *Ueber Aussprache, Vokalismus, und Betonung der lateinische Sprache*, and Lindsay's book might bear a similar title; certainly its main title, the Latin language, is somewhat vague, inasmuch as Syntax is not treated at all. There are ten chapters divided as follows: 1. The Alphabet, 12 pp., with copious extracts from the original sources of our knowledge, such as the remarks of the grammarians, and quotations of inscriptions; 2. Pronunciation, 132 pp. (based on Seelmann, *Aussprache des Lateins*). The remarks in this chapter on hidden quantities are especially valuable. Chapter 3, on Accentuation, has 68 pages; Chapter 4, on Latin Representations of the Indo-European sounds, 96 pages. It is well that Lindsay constantly retains the expression Indo-European instead of Indo-Germanic. Chapter 5 discusses the formation of noun and adjective stems in 49 pp.; 6, considers declension, comparison, and numerals, 55 p.; 7, pronouns, 32 pp.; 8, verbs, 95 pp.; 9, adverbs and prepositions, 48 pp.; and 10, conjunctions and interjections covering 21 pages. The treatment is thorough, the method being a statement of the particular problem under consideration, then follow the authorities, both ancient and modern, and detailed reference to the sources, and all from the standpoint of modern comparative philology. It is gratifying to find American work referred to occasionally. For students this book will take the place, to some extent, of Stolz's contributions to Mueller's *Handbuch;* and, indeed, so rapid is the progress of Latin philology that Lindsay's book will be soon supplanted by the great *Historische Grammatik der Lateinische Sprache*, now being published in Leipzig, and of which the first part, *Einleitung und Lautlehre*, by Stolz, appeared while Lindsay's work was in press. We could almost wish that the latter might be kept in type and issued with corrections and additions, twice a year as a periodical, thus placing in convenient form the latest discoveries in Latin philology; at least we may hope that new editions may appear from time to time.

Naturally in such a book we cannot agree with all that is said; where the subject is so wide and where so many problems are confessedly unsettled, one finds one's self at times opposing the author's conclusions; but it is not one of the least merits of the book that the evidence is all before one, and the margins are wide for the inevitable penciling. Misprints are wonderfully rare, considering the various alphabets and characters used. Occasionally there is a little slip, as on p. 178, where the statement is made that "in the classical period compounds with *indo* are only found as archaisms in poets, *e. g.*, *indŭpĕrātor*, Juv.," whereas on p. 583 we are bidden to compare classical *indĭgeo*, *indigĕna*, *indŏles*, etc. The index is not as full as it should be; the book is above all a reference book, and the index should be a complete key; the Dvenos inscription, for example, is cited a dozen times, perhaps, yet it has but one reference in the index. An index of authors and passages discussed would greatly increase the value of the book. The dialectic forms are also inadequately indexed. The characters used to express the various modifications of sounds might well be explained in some table; to be sure, on p. xxviii, the statement is made that Brugmann's system of transliteration is followed, and on pp. 285 and 290 there is a little explanation; but, as many persons who will use this book are not likely to have Brugmann at hand, a detailed statement would increase the value of the work, which is indispensable for Latin scholars.

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A Greek grammar for schools, based on the principles and requirements of the Grammatical Society—By E. A. SONNENSCHEIN, M. A. Oxon., Professor of Greek and Latin in the Mason College, Birmingham. (Parallel Grammar Series.) Part I, 1892—Accidence; Part II, 1894—Syntax. London: Swan, Sonnenschein & Co.; New York: Macmillan & Co., 152, 153 p. $1.25.

Professor Sonnenschein's Greek Grammar, just completed by the issue of the syntactical portion, is a valuable addition to the pedagogical material of the English-speaking teacher of Greek. The Accidence, which has been some two years before the public, has received the warm commendation of several distinguished Hellenists. It is the Syntax that now demands special attention. In this the author continues the application of the method—a method that cannot be too highly commended—of placing the corresponding, or contrasted, Latin construction side by side with the Greek. Besides this general feature we may note the following: The Syntax is divided into two parts: I. Sentence Construction, in which "those constructions which are peculiar to the complex sentence" are "treated *after* those which are common to the Simple and the Complex Sentence;" II. Meaning of Forms. The practical and the theoretical are thus at once separated and juxtaposed. In Appendix II. (Notes and Authorities on Syntax, pp. 335–344) we find several mooted points instructively, if not always convincingly, discussed. If, now, we examine the Syntax in greater detail we cannot fail to be struck with its *practical* character. The author has constantly in mind not merely the student that wants to read Greek authors by what Harry East called the "light of nature," but also the student that wants (or, perchance, is wholesomely required) to try his own hand at writing Greek. The latter kind of student is too often lost sight of on this side the water. The syntax of the noun is noticeable for the separation (in Syntax Part II), of the meanings of the genitive and dative proper from the inherited meanings of these cases, albeit this separation can never be carried through satisfactorily in detail, and one may easily dissent from some of Mr. Sonnenschein's views here. Still the separation is worth making, so far as it is possible. But it is to the syntax of the verb that we naturally look for new features. Here we find what we should expect from so modern a teacher as Mr. Sonnenschein—although we meet with disappointments too. The "conditional" subjunctive in clauses that are not formally conditional gives way to the "prospective" subjunctive. This certainly brings such subjunctives more nearly within the grasp of the average student and seems to put the case in a truer (I do not say true) light. But the treatment of the conditional sentence is painfully lacking in the simplicity and lucidity that mark Professor Gildersleeve's treatment (*Am. Journ. Philol.*, III., pp. 434 *sqq.*). But then Mr. Sonnenschein derives the εἰ wish, from the εἰ, protasis. The treatment of the direct and indirect exclamation as distinct from the interrogation is commendable. So too the full discussion of *oratio obliqua*, which might well have been made still fuller. The forms of "indirect speech" certainly demand and deserve far more attention than the long-suffering conditional. In conclusion I would call attention to some minor matters that require correction. Aristophanes' ἦμι is forgotten at p. 96; the "root *ΠΕΙΘ*" appears on p. 169; the optative gets more than its due in the "final" clause. An explanation of the reason why the predicate-noun is distinguished by the absence of the article, and why it is the perfect passive that takes the "dative of agency," might serve a useful purpose. Though much of Professor Sonnenschein's syntax can be regarded only as provisional, he has given us a book that cannot fail to be of great value to teacher and student alike.

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Mediæval Europe, 800 to 1300 A. D.—By EPHRIAM EMERTON, Professor of History in Harvard University. Boston: Ginn & Co., 1894. 607 p. $1.65.

This book enters upon its career with two very decided advantages over the usual brief history of the Middle Ages. The first lies in the fact that the author has himself prepared the way by an admirable *Introduction* to the same period; and, secondly, he has cut the chronological limits of the work to suit his own views, not according to the traditional pattern.

It is no small matter to clear away the brushwood in the early part of mediæval history, or to trace, with any sort of regard for the later science, the obscure transitions from things Roman to things Frankish. But, that having been done, and the fact having been assumed that the reader is reasonably familiar with the last pitches of the decline and fall and the first ascents of feudalism and Germanic law, it is much easier to present a view of the history and the institutions which are typically mediæval. Beginning his study at 814, Professor Emerton further lightens the task of the reader by closing it at 1300. He is judicious in choosing those boundaries in attempting to give a picture of the psychological movements and institutional phenomena which are alike distinct from the ancient and the modern. We are left a little in doubt as to a general term for the two or three generations next succeeding, for, although "Renaissance" is a long word, it would seem a little cruel to stretch it over the whole of the fourteenth century. Yet, as to the Middle Ages, Professor Emerton, with his disclaimer against hard and fast chronological limits, has done well to pause at this point.

In the scheme of treatment the political history is given in advance of the institutional. Divided into periods by some ten chapters, the rise of the German Roman empire, the restoration of the Papacy, the conflict over Investiture, and the struggle for Italy are traced to the advent of Charles of Anjou. The Crusades are examined all together as a single group of phenomena. The growth of French absolutism, the intellectual life, the typical feudal institutions, the laboring classes, and the ecclesiastical system are given each a chapter. A large amount of bibliography is scattered through the book, but it is a little difficult to determine for what class of readers it was intended. Although many discriminating remarks on authorities are made, many more would have to be added to give the references their most efficient use.

The book, as a whole, partakes of the interest and lucidity of its predecessor, the *Introduction*. The air is clear, the view distinct, so that difficult things under the author's treatment become natural and easy. Judicious management of detail is doubtless the key to this success, and the author and the reader are both to be congratulated that the events of five hundred years have been so well kept in hand.

J. M. VINCENT

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Five Lectures on Shakespeare—By BERNHARD TEN BRINK. Translated by Julia Franklin. New York: Henry Holt & Co., 1895. 248 p. $1.25.

Professor ten Brink of the University of Strasburg, who died some three years ago, was, at the time of his death, recognized as the foremost scholar in the world in his department of learning, which was that of English philology. His *History of English literature*, uncompleted though it was, is nevertheless the standard work for the centuries covered. This pre-eminence of a German scholar in the field of English philology is not at all strange nor unaccountable to those who understand the conditions which have hitherto prevailed in German and in English university life, conditions which are at the present hour undergoing modifications to the great advantage of scholarship in English literature at the great English university of Oxford.

Professor ten Brink's pre-eminence in English philology was universally acknowledged. Shortly after his death I heard a German university professor, in a university lecture, characterize ten Brink's *Chaucer* as a "*Musterstück*," a piece of scientific work in the field of literature worthy of being held up as a model to young scholars. What a loss it was then to the world of learning that this most learned of all histories of English literature was broken off by the death of the author just at the threshold of the greatest period in English literature—the age of Elizabeth, the age of Shakespeare.

Shakespeare was ten Brink's favorite poet. He himself said that it was Shakespeare's inexhaustible spirit that had enticed him to devote his life to the study of English philology. But, though thus always a lover and a student of Shakespeare, ten Brink did not live to give to his favorite poet that detailed and minute study which he gave to Chaucer and to the earlier literature of England. We have in these five lectures, therefore, not the exhaustive scientific work which ten Brink would have produced on Shakespeare had he lived ten years longer, not such a work as his book on Chaucer—indeed, not a book for Shakespeare specialists at all, perhaps, but doubtless for this very reason a book better suited to the average reader and lover of Shakespeare's plays. These are five lectures given at Frankfurt in the new Exchange in February and March, 1888. And, being popular lectures and not scientific work for Shakespeare specialists, they are of necessity, to a large extent, expressions of personal opinion; the opinion, however, of a man whose life-long custom was to find a scientific basis for his opinion, the opinion of a distinguished scholar whose mere opinion carries weight.

The subjects of the lectures are: "The poet and the man," "The chronology of Shakespeare's works," "Shakespeare as dramatist," "Shakespeare as comic poet," "Shakespeare as tragic writer." In "The poet and the man" ten Brink enlarges upon the influence of Shakespeare's early life in the country in giving him "a universal sympathy for all created things" and in guarding him from "developing one side of his talents at the expense of others." Having dwelt upon the importance of a "healthy organization" (thus minimizing the importance of a lack of knowledge obtained in the schools), and having shown the value to "the greatest dramatist of all times" of that intimate knowledge of the stage which made possible that "combination of deep and imperishable matter with the most intense immediate effect," which "stamps the works of Shakespeare as unique," he disposes easily of the Bacon contention as "a mere curiosity, a morbid phenomenon of the time," and sets before himself the task of discovering "the spiritual unity" in the creations of the poet by considering each one of these, not as an isolated work of art, but as a revelation of the man who created it. How important, then, is a knowledge of the chronology of the plays, for how can the works of the poet be seen as "a great organism," as a revelation of the "spiritual unity" between the man and his work, if we do not know the order in which these works were produced? This is, perhaps, the fundamental thought of the book—to give an insight into "the development of a definite intellectual personality," so that we shall be able to distinguish and to judge accordingly the immature early dramas with their "disproportion between the plot and the *dénouement*" from those works of his maturity in which this "greatest of tragic writers" reveals his "incomparable tragic power."

In this attempt to obtain an insight into the "definite intellectual personality," which produced these dramas, ten Brink considers the prevailing characteristic of each chronological group of plays, and endeavors to infer therefrom Shakespeare's point of view at this period of his life, as for example the new period in Shakespeare's development which began in the year 1601. The preceding plays were radiant, romantic comedies. We now step from the "sunlit landscape" of an

Arcadian world into "the bleak mountain region" of the great tragedies, a region of mist and gloom. How shall we account for this complete change in Shakespeare's mood? Professor ten Brink suggests the possibility of the influence of the conspiracy and rebellion of Shakespeare's friend, the Earl of Essex, in 1601, and the subsequent death of Essex and his followers upon the scaffold. The play of *Julius Cæsar*, in which we have the conspiracy and death of the noble Brutus, was written, probably, in 1601, or shortly after; and this was followed by *Hamlet*, *Othello*, *Lear*, *Macbeth*, those "grandest creations of the tragic muse in all literature." But in 1608 "a reaction takes place in the poet's mind," and we have the last utterances of his poetic genius written in an entirely different mood. Professor ten Brink hints at a possible cause for this change of mood, and thereby brings the reader into more intimate relations with that "definite intellectual personality," whose creations are thus seen to be "a great organism," a revelation of the spiritual life of this "greatest dramatist of all times."

No less suggestive is the little volume throughout. The author asks what the German stage would be without Shakespeare, and suggests the influence of the stage upon culture. He compares the treatment of the Romeo and Juliet story by Brooke and by Shakespeare. In Brooke's poem the separation occurs three months after the marriage, in Shakespeare within a few hours. This slight deviation in regard to time, ten Brink asserts, adds infinite pathos to the fate of these "two glorious creatures," made for each other, and yet "upon this brief day follows at once the eternal parting. This is poetry, this is tragedy."

There is much of interest in the discussion of Shakespeare as a comic poet. Ten Brink holds that in the dramas of the earliest and of the latest period Shakespeare, "to some degree, violates our sense of poetic justice," touching in this connection upon the fate of Shylock.

In the closing lecture we have some discussion of the nature of the tragic error which results inevitably in tragedy, in regard to which there arises much confusion of thought from a confounding of morals and æsthetics. The tragic error is not always a moral error, and even when it is a moral error it is "more divine to pity Othello or Macbeth for his deeds than to condemn him." And yet Shakespeare "appeals to our conscience," he "strengthens our faith in virtue," he "makes us feel how the good" is in itself "a thing most real," and that "it is infinite love which pervades and animates the universe."

This little volume is throughout stimulating and suggestive. It is designed to bring the poet closer to the understanding, but above all to the heart of the reader. And the pleasure of the reader of this loving tribute to our great poet is heightened by the knowledge that it is the tribute of a great scholar, whose habit of mind was scientific to the last degree, and whose appreciation was therefore based, not upon sentiment alone, but upon sentiment subdued and instructed by science, the science of language and of literature.

RICHARD JONES

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Lyly's Endymion—Edited by GEORGE P. BAKER, Instructor in English at Harvard University. New York: Henry Holt & Co., 1894. 109 p.

The history of the English paragraph—By EDWIN HERBERT LEWIS. The University of Chicago Press, 1894. 200 p. $1.00.

An introduction to English literature—By HENRY S. PANCOAST, Instructor in English in the DeLancey School, Philadelphia. New York: Henry Holt & Co., 1894. 473 p.

Specimens of exposition—Edited by HAMMOND LAMONT, Instructor in English, Harvard University. New York; Henry Holt & Co., 1894. 180 p.

It is a great temptation to speak of Mr. Baker's book and Mr. Lewis's thesis in detail, for both are, in a great measure, works of original research, and have in them much that is novel and suggestive. But in the crowded pages of the EDUCATIONAL REVIEW it is an absolute duty to confine one's self strictly to the point of view of the teacher rather than to allow one's self the license of appealing to the special scholar. To the teacher of English who follows closely the literature of his profession both books will be of interest and value. Mr. Baker's preface, at first sight disproportionately long for the single play which accompanies it, proves to be a remarkably sound and detailed estimation of the often contradictory facts known in regard to Lyly's life, an elaborate examination of his relations to the drama of his time, and a careful study of the political allegory of *Endymion*. The play itself is annotated with discretion and learning. Obviously too advanced in character for use in the secondary schools, Mr. Baker's study is none the less to be highly recommended for students who are mature enough to profit by a monograph dealing with difficult problems in the history of English literature, and contributing directly to their solution. Mr. Lewis's thesis, presented at the University of Chicago in candidacy for the doctor's degree, is likewise not meat for babes, but it is distinctly interesting as carrying a step further the method of statistical analysis of rhetorical forms for which Professor Sherman has recently stood sponsor in his *Analytics of literature.* In general this method of research seems likely to yield interesting and, perhaps, valuable results, though at present it is doubtful whether some of the premises which the school lays down in investigation are fully justified, and whether the system is capable of accomplishing all that its advocates claim for it. Mr. Lewis's zeal and industry, however, cannot be doubted, and no student of rhetoric can read his thesis without finding in it a large amount of interesting and suggestive matter in regard to the history of the English paragraph from the time of Alfred to our own day—its chief forms of structure, and its relation to the words and sentences which compose it, all tabulated and averaged with astonishing minuteness.

Mr. Pancoast's book and that of Mr. Lamont are text-books pure and simple. The first is unquestionably the best textbook in the field on English literature. The style is sometimes turgid, the literary criticism is not always of a high order, the grasp of minute fact sometimes weak; but the proportions are good, the classification scientific, the matter interesting and pertinent, the bibliographies usually helpful. No other short work on the subject which I know is so compact, so likely to be stimulating to the pupil. Mr. Lamont's little book on exposition is a compilation, but an exceedingly useful one. Teachers of composition, especially in the schools, have been in the habit of laying great stress on narration and description, as if the writing of stories were the aim of one's existence. If any one kind of composition is broadly typical, it is certainly exposition; and Mr. Lamont has helped us greatly in collecting good specimens of all the distinctive species of it, and preparing them suitably for the use of pupils and teachers.

G. R. Carpenter

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VIII

EDITORIAL

A strong and representative committee of twelve, appointed by the American Philological Association for the purpose, has issued an address, in which arguments are adduced to prove that college preparatory schools should reject the so-called classical programme recommended by the Committee of Ten on Secondary School Studies, because it provides for but two years of instruction in Greek. The philologists contend that three years is the minimum time that should be devoted to Greek in preparation for college work. There is doubtless something to be said on each side of this question, although so many pupils are now well prepared to enter college after but two years or less of Greek, that the committee of twelve would seem to be depending largely upon old and ineffective methods of teaching to fill out the time. But there can be no doubt whatever that the philologists have not considered carefully the problems that the Committee of Ten had to solve. In the first place, the Committee of Ten formulated courses four, and not five, years in length. Next, they were guided by the rule laid down by the language conferences, to the effect that two foreign languages should not be begun at the same time; and, as the Committee pointed out in their report (p. 48), "to obey this rule is to accept strict limitations in the construction of a four years' classical programme." Furthermore, inasmuch as the Committee of Ten were framing programmes for a national and democratic system of education, and not for an education of classes or sections, they naturally endeavored to postpone until as late a period as possible the grave choice between a classical and a Latin-scientific course. The reasons given by the committee for this are conclusive,[1] but the philologists seem not to have heard of them.

There are other respects in which the address of the philologists does not do full justice to the Committee of Ten. For example, no evidence whatever is adduced in support of the statement that "nothing can be more obvious than the deliberate intention of the Committee of Ten to confine Greek to the last two years of preparation for college, and gradually to establish two years as the maximum of time which even the best schools will regularly give to the language." Far from being "obvious," it is safe to say that no single member of the Committee of Ten had any such intention as is here referred to. Nor do the philologists make any reference to the express statement of the Greek Conference (*Report of the Committee of Ten*, p. 77) that there are circumstances under which Greek should be pursued but two years in the preparatory school; nor to the further statement of the same conference, that the three years' time prescribed amounts to but two and a half years, anyhow. So there is nothing sacred in the number three, after all.

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[1] See *Report*, pp. 45-47.

At first glance, then, it would appear that the philologists, eager to defend Greek, have failed to bear in mind the very practical aspects of the problem that confronted the Committee of Ten, and that, as is natural in a committee two-thirds of whose members are from Eastern colleges and academies, the needs of the public high schools have been largely overlooked by them. The educational position of Greek in America is shaky enough at best, and it can only hope to retain its influence by the aid of the best and most economical methods of teaching, as well as by broadmindedness on the part of its representatives, and by full recognition on their part of what the problems of secondary and higher education in this country involve.

In the very practical and courageous report on the schools of Omaha, that Dr. Marble wrote after his defeat for re-election as superintendent in that city, he says:

> The direction of a system of schools requires, on the part of teachers, due subordination and co-operation with the principal; it requires of the teachers and principals co-operation with the supervisors of departments and with the superintendent; it requires from all these subordination to the Board of Education and the rules it has laid down. With few exceptions—I might almost say with a single exception—these relations havs been cheerfully maintained, and any slight deviation that might occur can be easily corrected, if every member of the board will leave to the superintendent the exercise of that authority with which he is invested by your rules, and which, by universal custom, belongs to this office. But when a principal

consorts with politicians on street corners and in secret conclaves, and presumes, and openly claims, by such outside influence to control a majority of the board; when a member of the board states in the presence of others that he desires this principal to think him to have acted differently than his judgment has dictated; when such a principal, with indifferent scholarship and with very moderate ability as a teacher, assumes to sit in judgment upon the superintendent, to misrepresent that officer to his *confrères*, and even openly to aspire to some higher position by means of a so-called "pull" upon this board—then self-respect, not to say the welfare of the schools, would seem to demand that you take notice of such conduct, however insignificant the person. It is notorious that this picture is true to life. I conceive it to be my duty to speak thus plainly, in order that it may not be my fault if you do not purge yourself of such an influence as he represents and seeks to exert.

This description of the political principal is true to life, and applies equally well to cities not so far from the Atlantic Ocean as Omaha. The principal, who is appointed for life by a local board of politicians and nondescripts—as in New York, for example—is virtually independent of the superintendent, and may, and often does, become the greatest obstacle to the progress of the school system. Dr. Marble has done a public service in calling attention anew to this genus.

The careful attention given by the Council at Denver to Professor C. A. McMurry, and the marked favor with which his proposals regarding the elementary course of study were received, have given a widespread interest and importance to the syllabus that he presented to the Council. It was entitled "Influence of Herbart's doctrine on the course of study in the common schools," and is as follows:

1. The purpose of this educational movement is to gather into the school course as much of the world's accumulated store of culture as is suited to exert educative influence upon growing children. It is the problem of collecting and arranging the best materials of culture which history, literature, and social and scientific progress have brought to light and stored up.

2. It seeks in our own American history and literature, as expressed in our mother English, the principal center and substance of culture for our common schools. It is not foreign nor exotic, but thoroughly domestic, Anglo-Saxon, American. It is not in search of foreign curiosities. Its geography begins at home and remains long within our own borders. Its natural science deals chiefly, almost entirely, with our native plants and animals and with those natural forces and phenomena with which every child may be made familiar in his own home and neighborhood. By the increased emphasis which it places upon the story of our early national life and historical development, by the more abundant use of the shorter

and longer masterpieces of our best American writers, it seeks for a fruitful entrance into the hearts of children or the strong and wholesome influence of our best American culture. It is, therefore, national and patriotic in the true sense.

3. Secondary and supplemental to these American materials are the choicest products of English and European history and literature. The history and literature of America, surprisingly rich as it is, is not complete enough to give the children the full rounded measure of culture which the experience of the world has gathered for the educative enrichment of children. We are compelled to draw upon Europe for some of the best thought materials with which to fill out the course of instruction for the young.

4. It is very evident that our course of study is deeply rooted in the past, that culture and civilization are a product not to be manufactured to order, but a growth and registration in historical and literary forms of racial experience and progress. The reason why we harp so much upon literature and history is because they contain in potent educative solution the rich culture influences which we wish to see redeveloped in every child. Moral and social culture, with all their humanizing influence, are contained in the choicest literature of America and Europe. Here are the ideals of life, revealed in their supreme strength and beauty. Here are the examples of men and women who lift and inspire. Here are revealed the moral qualities which should form the backbone of character.

5. If the course of study as a whole is thought of as a rope or cable, one of the important strands is a series of elementary science lessons stretching through all the grades. This fully accords with the immense influence upon human life which scientific progress has already attained. Herbartian pedagogy is in this respect thoroughly modern and stands abreast of the requirement that education shall equip a child to live up to his present opportunities, and to make use of the fund of scientific knowledge.

6. This educational movement includes such a mastery of the English language and of elementary mathematics as our schools have long aimed at, but only partially realized. It suggests no great change in the scope of these studies. They are the necessary implements of culture, and supply the forms of thought. But they should not be wholly isolated from the other studies, nor their separate disciplinary value estimated so highly as of old. The ideals, inspirations, and original sources of energy are in literature, history, and natural science. They are like deep fountains which spring from unfailing sources of supply.

7. This educational doctrine includes the effort to grasp all the studies and influences of the school course in one organized unit of influence, to so relate and combine the different forms of school discipline as to centralize and strengthen their combined effect.

8. In addition to this effort to lay out the best school course and to harmonize its various studies, there has been a strong, persistent, and practical effort to systematize the method of instruction, to find a set of principles sufficiently positive and definite for a common platform upon which teachers may stand, and yet sufficiently elastic to adapt it to the variety of studies and to the individuality of teachers.

A somewhat full course of study for the first and second grade is given in the *First Year Book* of the Herbart Society for the Scientific Study of Teaching.

Leaving out arithmetic and language, which are similar to the usual course, a brief suggestive outline for fourth, fifth, and sixth grades is appended.

FOURTH GRADE

HISTORY

Thirteen stories of pioneer life in the Mississippi Valley: Marquette, La Salle, Lincoln, Clark, etc.

GEOGRAPHY

Twenty important topics in the Mississippi Valley. The Illinois River, the corn and wheat regions, forest belts, coal fields, etc.

READING

The Wonder Book
Kingsley's Greek Heroes
Tales from Spenser
Hiawatha
Stories of the Old World

NATURAL SCIENCE

The forest trees
Hardwoods: maple, oak, hickory
Evergreen, pine, etc.
Wild animals of Mississippi Valley: deer, bear, beaver
The formation of coal

FIFTH GRADE

HISTORY

Pioneer Explorers
Twelve stories of Champlain, Hudson, Raleigh, Columbus, Smith, Cortes, Washington, etc.

GEOGRAPHY

The Eastern States and North America
Twenty-five important topics, as The White Mountains, Hudson River, New York City, Washington, etc.

READING

Higginson's American Explorers
Tales from English History
Lays of Ancient Rome
Black Beauty

NATURAL SCIENCE

Butterflies, bees, and other insects
Grasses
Physical experiments, pumps, engines, compass, thermometer, barometer
Weather study

SIXTH GRADE

HISTORY

The colonial period in Massachusetts, Connecticut, New York, Virginia, Pennsylvania
French and Indian Wars

GEOGRAPHY

Countries of Europe and colonial possessions. Twenty-five important topics

READING

Grandfather's Chair
The Sketch Book
Miles Standish
Tales of a Grandfather
Birds and Bees
Autobiography of Benj. Franklin

NATURAL SCIENCE

The robin, thrush, owl, etc.
The frog, crayfish
Turtle, fishes
Experiments in combustion: the lamp, stove, etc.

The very inadequate newspaper reports of the legislative investigation of the Regents of the University of the State of New York gave no proper idea of the extent to which the gayety of nations was promoted by that performance. The legislative committee was made the means of attacking Secretary Dewey, in the interest of a gang of political drones and sharpers whose noses, when poked into the public crib in the vicinity of his office, have been soundly rapped. Had Mr. Dewey been an ordinary political heeler, he would have fared badly; but being a plain man of affairs, interested in the businesslike and economical administration of the department under his charge, he boldly avowed that he *had* waked up voters (paid by the State to work on the Capitol) who slept during working-hours; that he *had* insisted on able-bodied men riding in elevators with fifteen volumes as a load rather than three, when the library was being transferred; that he *had* brought up State Geologist Hall with a round turn when that functionary's eyesight grew dim as to the location of the line that divided State property from his own; that he *had* asked the legislature to appropriate money for a small printing office in the Capitol in order that examination papers might be safely and privately printed, despite the fact that the blessed labor unions regarded that step as an outrage, or something worse; that he had, in fact, done nearly all that was charged and rather took pride in the fact. In the face of this attitude, Mr. Dewey's accusers slunk back to their holes—a proceeding which apparently suggested to him the pointing out of other apertures hitherto unobserved. But the committee grew tired at that point, and the matter dropped. If it is ever taken up again some interesting disclosures are promised, but Mr. Dewey will be at the other end of the investigation next time.

The unfortunate and perplexing circumstances attending the failure of the Omaha Board of Education to re-elect Dr. Marble as superintendent of schools have been made widely known through the press. Dr. Marble bore himself with great calmness and dignity throughout the trying ordeal, and nothing that has occurred has weakened his position or influence as an educational leader. Superintendent Cooper of Des Moines declined to become Dr. Marble's successor, because of the treatment accorded the latter. After some weeks of waiting the superintendency passed to Mr. Pearse of Beatrice, as energetic and competent a public-school man as is to be found in the great Missouri Valley. It is sincerely to be hoped that Mr. Pearse's administration will be as successful and harmonious as it deserves to be.

Evidence multiplies that school reform must be achieved not only without the cordial co-operation of many teachers, but often in spite of their opposition. The latest instance is at Paterson, N. J., where Superintendent Reinhart, who, after three years of devoted and untiring work, has succeeded in rousing the schools from their lethargy, was bitterly opposed for re-election by a majority of his principals and teachers on grounds that would have been laughable were they not so pitiful. The real trouble was that they have been forced to study and to improve their work. Such reforms as Dr. Reinhart had introduced were of the most obvious and conservative kind, but they were none the less disagreeable to the mechanical teachers whose intellectual somnolence was rudely disturbed by them.

Dr. Soldan is a fit and proper successor to Dr. Harris at the head of the St. Louis schools. No superintendent in the country surpasses him in scholarship, sagacity, and educational ardor.

It behooves the friends of school reform in New York to look carefully after the nominations now being made for the next legislature. If the hold of the school ring is to be broken, it must be by the enactment into law of some such measure as the Committee of Seventy approved last winter, and which was beaten by the politicians, after a desperate struggle.

The Report of the Royal Commission on Secondary Education was laid before Parliament in August, and will soon appear in printed form. Dr. Fitch will discuss its recommendations in an early issue of the REVIEW.

EDUCATIONAL REVIEW

NOVEMBER, 1895

I

CONTEMPORARY EDUCATION IN FRANCE

What may be termed the heroic age of the organization of public instruction in France closed several years ago. Nearly all the great reforms have been accomplished; and for some time, at least, it is probable that we shall content ourselves with merely perfecting, by measures of detail, the regulations and laws which govern our three grades of education. Just now, we have nothing which resembles enterprises of general reform like those which have been successively elaborated by the American Committees of Ten and of Fifteen. Yet we do not remain inactive, and the following are some of the academic events of the year which has just closed.

I

In the field of higher education we have not yet been able to obtain a law officially recognizing a number of our groups of faculties as universities—a name that some of them have already taken on in current language. But we are able to say that, by a continuous series of progressive steps, the majority of our centers of higher education have acquired all the essentials of what constitutes a university; so that the thing is at hand, if not the name. On the day, which appears to be approaching, when the law will at last confer upon them a definite civil status by denominating them universities, the reform will be more verbal than actual; it will be a mere formality. In fact our *Corps de Facultés*, as they have been legally termed since the decree of 1893, possess all the conditions of genuine university life. First, on the side of the instructors, there is a General Council, with the rector as chairman, composed of the deans of the faculties and two professors from each faculty, chosen by their colleagues. This body represents the common life of the university and is the instrument for the federation of the various schools associated and grouped together. Each year the branches of instruction grow more numerous and varied. The list of subjects has almost doubled within the past twenty years. We have, too, a cautious application of the system of elective studies, which is used so largely in America; so that, for instance, a student in the Faculty of Letters may substitute for a course in literature one given by the Faculty of Law, of Medicine, or of Science. There has been constant increase in the number of laboratories, which, while they may not equal those of America in the luxury of their appointments, are yet daily better equipped and enriched with all the instruments necessary for scientific work. On the side of the students there have sprung up associations and societies, which meet for mutual study or amusement. They assess themselves to establish libraries, reading rooms, and sometimes popular lectures. All the elements of academic life, all the germs of a noble and powerful effort in the sphere of the higher education, have gradually grown up in our *Corps de Facultés*, and really there is nothing more to be done, except to call them by another name, to make them real universities at the height of their scientific and social usefulness.

There is good reason to hope that our Groups of Faculties will not wait much longer for the name which they merit. In fact, the ministry, on June 18, 1895, presented to the Legislature a public bill relative to the constitution of the universities, which seems to me destined to receive a majority vote because it has carefully avoided striking against the rocks on which former plans were stranded. Hitherto the idea which had prevailed in the government councils was to create only a very small number of universities, six or seven at the utmost, for all France. In America, the great name of university is given right and left, and apparently there is no fear of degrading it by allowing its use by institutions that have only nebulous relations with higher education. In France, by an opposite tendency, the Ministry of Public Instruction preferred to adhere to a rigid limitation; to make the centers rarer, that they might be more brilliant. But this restrictive policy, which perhaps is more in harmony with the real interests of science, had the weakness of wounding the self-respect and lowering the position of those faculties which were not granted the title of university. So the original plan succumbed to the complaints and opposition of those cities that fancied themselves injured in their academic interests. The new plan recognizes all claims, and this will assure its success. No one of the Groups of Faculties actually existing is sacrificed. There will be as many French universities as there are centers of higher education already established, fifteen, namely: Paris, Lyons, Bordeaux, Toulouse, Montpellier, Aix and Marseilles, Lille, Nancy, Poitiers, Rennes, Caen, Dijon, Grenoble, Besançon, and Clermont. Does this mean that these fifteen universities will be equal; that all will possess the same importance? No. In the first place the new system under which they will be summoned to live leaves them, from the standpoint of the character and number of the branches of instruction which they give, in precisely their present condition; so that some, the most complete, will number four faculties, while others will have but three; Besançon and Clermont will have only one each. But, unequal from the beginning of their constitution, the future universities are destined to become still more so in the immediate future. For it is specified in the new plan that they shall themselves collect and use at their pleasure, on the responsibility of the Minister of Education, a part of the fees paid by the students. These receipts will be used to develop and multiply professorships, to increase and enrich laboratories and academic apparatus. Now it is only in the most popular universities that the fees of the students will be sufficiently large to permit any thought of the increase of material equipment or any improvement in number of teachers. The less favored institutions will only be able to maintain what they already possess. So the law will introduce a principle of competition, and consequently of inequality, into the organization of the various universities, by making them rich in proportion to the number of pupils they succeed in attracting, and by granting them the free disposal of their wealth.

On the other hand, there is no doubt that the subsidies of Communes and Departments, as well as the gifts of private individuals, will go by preference to certain universities. Those which are situated in the most important cities will gain the ascendency over their rivals by the number of their professors and their students. All the universities will undoubtedly be government universities, because the Government will secure to them the annual endowment entered in the national budget, which is about twelve millions. But, invested with corporate rights, as the *Corps de Facultés* have been since 1893, they will be able to receive gifts and legacies, to profit by the liberality of private individuals, as well as that of public bodies. And though, less fortunate than the United States, we have not yet witnessed the appearance of the race of generous donors, such as Leland Stanford, the Vanderbilts, and so many others, who have flung millions of dollars into the vaults of American universities, there is reason to hope that our French universities also will in the future find some private benefactors. The most favored among them, at least, will do honor to their native land, which, in the Middle Ages, had the glory of being the mother of the universities of all countries. Our democracy, in spite of its leveling and sometimes lowering tendencies, will know how to understand the necessity and encourage the development of a system of higher education, which shall not only labor for the advancement of knowledge, but in our unsettled times, darkened by false doctrine and agitated by the ignorant, shall also fulfill a social mission, by informing the minds and steadying the convictions of the people at large.

This adjustment of social and political standards, which must henceforth be one of the chief objects of the higher education, is illustrated this year in the reform of our doctorate of law. It is well known that the conditions under which the study of law is pursued in France are much more rigorous than those prevailing in America. To be admitted to the examination here, it is necessary to be provided with the bachelor's diploma taken in the classical course. The bachelor's degree in science does not suffice to procure admittance. The course of legal study itself is long and laborious; it lasts at least five years, two years for the baccalaureate, one for the licentiate, two more for the doctorate. Until now we have had but one form of the doctorate of law, henceforward there will be two: the doctorate of legal science and the doctorate of political and economic science. The object of the reform which the decree of April 8, 1895, sought to establish is at once obvious. The idea was by no means to lower the standard of the legal diplomas, which are specially sought among us because they confer a privilege with regard to the military service. For a student of law, as well as a student of medicine, who has spent a year in the barracks is exempt from the other two years with the regiment prescribed for all Frenchmen, if he has obtained the title of doctor before attaining the age of twenty-seven. Undoubtedly the new system concerning the doctorate will facilitate the admittance to the degree of a certain number of young men who care little for the arcana of the Roman law, and have more inclination for modern law. But although there may henceforward be two roads opened to lead to the same goal, it is not possible that the faculty of law will permit the degrees which they confer to be lowered in their hands. The new doctors of political and economic science will have pursued somewhat different studies from those of their companions, the doctors of legal science; but they will work as much, and their knowledge, although dissimilar, will be equal. In law, as was the case in the reform of secondary instruction, which has placed upon an almost equal footing the classic Greek and Latin education, and the modern one of the living languages and science, it must have been deemed possible to modernize the course of study without enfeebling it. It must have been felt, especially, that it was needful to develop more and more the sciences which have great social importance—political economy, finance, legislation, and industrial, rural, and colonial economy. These are the branches of knowledge which it is desired, in some way, to emancipate and withdraw from the tutelage of their elders the sciences of pure law, to which they have become equal in importance.

It may be important to note other points in our reform of the doctorate of the law. First, in order to permit freedom of study, the principle of elective studies has been admitted to a certain extent. The student of legal science can choose between the course of administrative law or of international public law. In the same manner the student of political science has the choice between industrial legislation, rural legislation, and colonial legislation, which are so many distinct branches of instruction in the faculty of law, and for these same studies he has the right to substitute, as an equivalent, a course in history or economics taught in another faculty. On the other hand, a fortunate tendency is manifesting itself in the direction of a more practical method of instruction; one which stimulates the student's activity more and brings him in closer contact with his teachers. He is not merely offered the teacher's lectures, given *ex cathedra*, but he is also summoned to *conferences* or seminars, where practical exercises, examinations, written papers, studies of authors and of texts, are appointed and discussed; and where special questions connected with the topics of the lectures are minutely examined. These *conferences*, which are directed by the professors and which do not include more than a few of the most advanced students, are not made obligatory, but the students are encouraged to attend them: first by the profit which they will derive from them, and next because the work done in the *conferences* will be taken into account at the time of final examination. Therefore the happiest results may be expected from the modifications introduced into the instruction of our faculties of law, and it is to be hoped that a large number of industrious students will bear witness to their excellence by seeking successively, as they are entitled to do, both doctorates—the legal and the political.

II

We do not misuse educational statistics in France. Our department of secondary education publishes none. Those of the higher education appear only every tenth year, the last ones being issued in 1878 and 1888. But the directors of our primary education are less niggardly of information. They issue annually a summary of statistics under the title of *Résumé des États de Situation de l'Enseignement Primaire*, and every five years they prepare a huge volume which notes with precision all the facts, all the details, all the movements of progress, or sometimes of retrogression, which concern our primary schools. The last volume of these great quinquennial statistics has been published this present year; it covers the period from 1887 to 1892, and, like its predecessors, bears witness to the minute care with which M. Levasseur, and his coadjutors on the statistical commission of which he is the president, perform their work. There is nothing in these French statistics which lays claim to anything beyond a numerical statement and a commentary rigidly confined to the figures printed. The admirable reports of the Bureau of Education in Washington, in which Dr. Harris annually accumulates his treasures of information, contain in their complexity and their wealth of documents of every kind, information upon all possible subjects. They are, as the editor of the EDUCATIONAL REVIEW recently said, veritable encyclopedias. M. Levasseur's reports, on the contrary, eliminate from the authorities used everything which does not properly belong to the domain of statistics. Discussion is either omitted entirely, or is limited to making intelligible the numerical tables, which fill three-quarters of the volume.

Evidently it would be impossible to review here all the interesting information which a large quarto of 350 pages brings us concerning the official statistics of 1887–92. The number of children to be educated, the means of instruction, inspection, schools, classes, teachers, preparation of teachers, the pupils, the auxiliary institutions, the results of the education, the financial statistics, the expenses of primary education, are passed in review. But, without entering into the details, it may be said that all these figures have their eloquence, and that they testify loudly in behalf of the continuation of the efforts to secure to French democracy an academic organization worthy of it. True, in 1892 we had only 6,263,049 children in our primary schools of every grade, infant and elementary, public and private (including Algeria), while the United States numbered 14,165,182 (statistics of 1892). But the population of the United States is 64,334,561; that of France and Algeria, 42,267,924. Besides, it must be taken into consideration that the primary-school course in America is longer than it is with us. There it usually includes eight years, from the age of six to that of fourteen, while in France it is only six years long at the utmost. Therefore it does not seem that, from the standpoint of the number of pupils, our situation is greatly inferior. But it is inferior so far as concerns the proportion of the children attending the public schools. In America out of 100 pupils, 91 go to the public schools, only 9 to the private ones; in France out of 100 there are about 77 pupils in the first category, 23 in the second.

Certainly we have not as brilliant a step forward to record during the period from 1887–92 as America has. In the majority of points, however, the progress is marked. In five years 2705 schoolhouses have been built; there are only 50 small parishes without schools. The number of classes, that is of sections, of schools intrusted to a special master has perceptibly increased; out of 100 schools there were, in 1887, 163 classes where in 1892 there were 170. In 1887 we had in France and in Algeria 147,874 male and female teachers in the primary schools (infant, elementary, and upper); in 1892 there are 7553 more; that is, a total of

155,427. Of this number 107,626 belong to the public schools—not all are lay, it is true, since there are 132 male and 12,712 female religious teachers. On the other hand, 47,801 persons teach in private schools, lay or confessional. Thus it appears that about one-third of our school masters and mistresses still give instruction for the religious corporations.

One of the points on which we have the most reason to congratulate ourselves is the condition of the upper primary schools: 45,599 pupils in 1892 instead of 38,441 in 1887. It is interesting to remark, in connection with the inquiry instituted concerning the destination of the young people who graduated from these schools, that a very large proportion of them enter manufacturing, commerce, and agriculture.

It is difficult to establish by statistics the positive results of the instruction given in the schools. Still we may appeal to two kinds of evidence: (1) the number of conscripts who, at the time of entering the barracks, assert that they know how to read or know how to read and write; (2) the number of husbands and wives who have signed their marriage contract, In both lines there is progress. The number of conscripts who knew how to read was 89.7 of 100 in 1888 to 92.6 in 1891; that of women who signed their marriage contract, 79.8 of 100 in 1885 to 87.4 in 1890. Another indication which is not to be despised is the increase in the number of certificates granted to children who have completed the elementary course of study. These numbered 145,134 in 1887, and 175,675 in 1892.

But where statistics are most significant is when the point in question is to estimate the expenditures and to exhibit the budget of the schools. According to the last report of the Bureau of Education at Washington, the annual expenditure in the United States for the public schools amounts to about 156,000,000 of dollars, that is nearly 800,000,000 of our money. The average outlay for each pupil there would be $15; that is nearly 75 francs. Whatever reproaches some of our fellow-citizens have addressed to the French Republic concerning its extravagant inclinations with regard to primary instruction, we are far from approaching the enormous sums which are permissible only to the wealth and prodigality of the Americans. The total of the expenditures, according to the statistics of 1892, has increased in five years about 13,000,000—from 173,000,000 in 1887 to 186,000,000 in 1892; that is 34.29 francs per pupil in 1887, and 39.26 francs in 1892. True, we must add the cost of building and furnishing the public schools, for which, from 1878 to 1893, we used 594,500,000 francs, plus 51,000,000 for the normal schools alone.

One cannot overestimate the importance of such financial exertions in a country which must also meet overwhelming military expenses, and which annually expends more than a thousand million francs for the army and the navy. France is now covered with schools. For twenty years the Government has multiplied its sacrifices. This exertion will not have been futile, if, as I hope, and as the Congress recently held at Havre seems to prove, private initiative and the enthusiasm of the voluntary societies come to the aid of public education.

The Congress of the Societies of Instruction and Popular Education met at Hâvre on the 30th of August. It did not lack official patronage, since the Minister of Public Instruction, M. Poincaré, twice made eloquent addresses, and President Faure honored one of the meetings with his presence.

Moreover, its discussions were directed by the eminent Rector of the University of Paris, M. Gréard, and the distinguished Director of Primary Education, M. Ferdinand Buisson, took part in the deliberations. The Congress, which numbered more than four hundred members, some of whom were foreign delegates, was primarily a manifestation of the work of private initiative in education. The Society of Scientific Education by Object Teaching took the lead in the movement, and organized the gathering. The programme of the questions to be treated comprised four parts: (1) courses for adults, (2) popular lectures, (3) education by object teaching, (4) academic patronage. But, in reality, beneath all these four different forms was one and the same question, which was presented for the consideration of the Congress—"How can we continue and complete the work of instruction and education commenced by the primary school?" In fact, it is one of the dominant movements of the present hour to seek means of developing, or at least of preserving in adults, the instruction and education already received by the children and, as it were, build the second story of the primary schools. The primary school undoubtedly does all that it can; but pupils leave it when they are twelve years old. At this age it could have inculcated only the elements of knowledge, the germs of morality, which will not bear fruit unless care is taken to cultivate them. From the time of leaving school until the entrance upon the life career, that is, from twelve to twenty-one, is a difficult period, during which the child, having become a youth, is exposed in his life as an apprentice, journeyman, workman, to all the evil impressions of the outside world. There is no more lack of taverns and vicious newspapers in France than in America. Besides, the outlines of knowledge which the school has communicated are in danger of being effaced from the mind, unless the opportunity is furnished to develop them. It is to fill this gap that the volunteers who arranged to meet at Havre seem disposed to devote themselves with confidence and ardor. The first thing to be done is to reorganize the adult courses which, after having been in a flourishing condition several years ago, have gradually declined. The problem is to multiply them, render them more efficient by adapting them to the needs of local industries, and to impress upon them a character of practical utility. The Government undoubtedly will consent to encourage, by financial aid, the courses for adults, and to pay the teachers who will take charge of them, but we cannot expect to reach solid results unless the municipalities and the free associations also give them their co-operation. It is the same with the popular lectures which, for several years past, have become acclimated in our little villages. On Sundays the teacher assembles men and women of all ages in the schoolroom and, either by readings from the great writers or familiar talks about national history, moral virtues, and civic plans, on the new methods of agriculture, manufacturing processes, or great scientific discoveries, he interests and instructs them. One condition of making these lectures a success is, that they should be not only instructive, but attractive. Hence, the importance of the third question considered by the Congress, that of teaching by objects.

For all this propaganda of instruction and education, the Congress showed that it desired especially to appeal to individuals, to private associations, and notably to what has been termed "the academic patronage"—that subtle feeling of social and educational fraternity, which will offer young people a refuge and a protection against the evil tendencies of life, create public libraries, clubs for amusement, reunions of all sorts; and strive, in a word, to keep children and grown people in the healthful atmosphere of an educational environment which will enhance the beneficent influences of the family.

Many useful ideas and ingenious views were brought forward at the Havre Congress; but the principal result will be the arousing of public sentiment to co-operate with the government in the work of public education. "The Congress," M. Poincaré said in his closing address, "has once more given the measure of what French democracy gains from forces ever ready; it has shown gathered around the Government, in a generous cordon, fathers of families, teachers of every class, citizens of all conditions—all equally convinced that, if a nation is to prosper and increase, it must place in the first rank of its daily solicitude the education of youth."

GABRIEL COMPAYRÉ

RECTEUR D'ACADÉMIE,
POITIERS, FRANCE

II

INDUSTRIAL TRAINING AS APPLIED TO INDIAN SCHOOLS[1]

No system of American training or education is right that does not seek to enlarge and develop all the abilities and open the way to widest opportunities for the individual, to remove prejudice against labor, and to give the courage to compete. The school can be just as potent an engine to create prejudice, stifle ability, and narrow opportunity as it can be to extend those qualities. This needs no argument.

We have an Indian problem because the Indian is ignorant of the language of the country, and industrially untrained to take his place among our other people. The problem will remain as long as the Indians are continued in masses apart from our other people, because by such massing they are held to their industrial inability and their ignorance of our language. Having for generations failed to induct them into the nation by our attempts to educate and train them separately in tribes, and having fully demonstrated that that method only leaves them tribes, we should now make all our future attempts at education and industrial training for them, positive influences to bring them into the nation through giving them the full use of the language of the country, and the full ability to meet and compete industrially with the other inhabitants.

In justice to itself, the Indians, and all the people, the Government should have but one aim in all it may do for them, and that aim to transform them individually into worthy, productive American citizens. The Indian is a man like other men. He has no innate qualities that condemn him either to prolonged separation from other men or to generations of slow development. He can acquire all the qualities of good, useful citizenship in about the same time that other men acquire them. He is hindered or facilitated in acquiring them only by conditions and environments that would equally hinder or facilitate other men in acquiring the same qualities.

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[1] A paper read before the Department of Industrial Education of the National Educational Association at Denver, Colo., July 11, 1895.

If the Indian has not had the same chance to acquire industrial knowledge and the language of the country, he is not to be blamed for not having these qualities equally with us. If he is not acquiring these qualities now as rapidly as he might and ought, it is because the contrivances we force upon him hinder. In all we do for him, we must necessarily consider first the English language; for without that he is condemned to perpetual disability. How is a usable knowledge of any language to be quickest and best gained? Manifestly, through association with those who use it. Neither books nor a special teacher are necessary. The subject, placed where he can hear the language constantly in use, gets the language.

Wise American parents, desiring their children to learn a foreign language, send them into the foreign country or into constant association with that language. Why not, then, when the school is so wide and free, contrive that the Indian have this same opportunity to learn the almost universal language of the country in which he lives, and which he must learn in order to be at one with the great body of its people? Upon his having a usable knowledge of the English language hinges all his success in his industrial training. Ignorant of the language, he is walled out industrially and in every other way.

Successful industrial training follows in the same line. His industrial needs are nothing more and nothing less than sufficient skill in some industry to enable him to successfully compete with other people. How is this competitive skill to be acquired? There seems no other proper way but to follow exactly the same lines indicated to be necessary in acquiring the language. The best agricultural school is the agriculturist on his own farm, where the daily pressure of necessity to get the work done, and the living and something more, hinge upon industry, skill, and intelligent management. In the same way, to make a blacksmith or a carpenter, the blacksmith shop and the carpenter shop, with a competent head and surrounded by competent workmen, is the true place. Working with the farmer and the mechanic, the Indian learns what a real day's work is, and becomes in every way a part of the situation. He acquires another most essential quality, seldom or never taken into consideration in estimating his needs, and that is the courage of civilization, the courage of language, the courage of industry.

At his home in his tribe, he measures himself and his needs only by the conditions of progress there, simply because he has no other experience or observation to guide. Gauging his needs by these weak examples, he is in no sense prepared for competition with the more skillful, aggressive, and productive race. This is why he goes to the wall when brought into such competition. The courage and ability for the higher competition are only to be acquired by actual experiences in that competition. There is, therefore, all the greater need that every part of the education of the Indian should be carried forward under the association and competition indicated. The tribe and all tribalizing influences are the enemies of the individual, if he is to become American and a citizen; for, immersed in the tribe, how is the individual to take on anything foreign to the tribe?

We have failed in our efforts for the Indian in the past, and are not materially successful now, because we have not recognized that the Indian is to be merged into our American system. The Indian is to save his life by being consumed and lost in America, which is comparatively a simple matter. In other words, the best way to get civilization into the Indian is to get the Indian into civilization; ergo, the best way to get industry and industrial skill into the Indian is to get the Indian into industry and industrial skill. Attempting to get civilization, industry, skill, and English into the Indian, by keeping him out of and away from these, is the cause of all our failures.

The Indian system, or an Indian system, is the real barrier to the Indian's progress toward becoming a civilized, useful man and citizen. When we established the reservation system, we got out the Indian's coffin, and every plan we adopt which makes him a specialty, crowds him into that coffin. If there were no Indian reservations, no Indian Bureau, no Indian annuities, no Indian schools, and the Indian had had to "root hog or die" like the rest of us, from the start, there would be more live Indians to-day than there are, and we should not be confronted with an Indian problem. We, and not the Indian, are to blame for his being a burden. The seven to ten millions of money spent yearly in the Indian service is an expenditure of our own creation, and very much more in the interests of the white man than the Indian.

We must not depend too much on industrial training in Indian schools, however practical or however promising the conditions. The best Indian industrial school can only inaugurate the industrial idea and give a smattering of industrial usefulness. The bone and sinew of real industrial worth come only through actual competition with the real industrial bread-winner. In order that we may not, in our industrial training of the Indian, get too far away from this vital principle, the most practical real mechanics and farmers are our best industrial-school instructors. All the school shops should be like the shops of regular everyday mechanics. The best division of time is half day at industries and half day at books. One recompenses the other and saves from weariness.

The subject should generally be held to one trade, so that there may be something of the old apprenticeship system, through which the greatest skill will be reached. The largest results that may be secured through industrial-school training for Indian youth will only be obtained through locating the schools in our civilized and industrial communities, so that the example of our own industry and skill may be always before the pupils. There need be no limit to the variety of industries taught. Distribution of occupation will aid to distribution of Indians and the consequent breaking up of Indianism and tribalism.

The question is often asked, "Can the Indian acquire mechanical skill and habits of industry?" and too often is answered in the negative by self-constituted judges who are without experience and generally with little or no observation. A man of sixty, born and raised on the borders of an Indian reservation in western New York, who had seen Indians almost every day of his life, on visiting Carlisle said to me, "You may be able to do something with the Western Indians, but the Indians of New York are utterly worthless and incompetent. They can pick a few berries, dig a little sassafras root, make a few beaded articles and some baskets to sell, but that is about the extent of their industries. You cannot educate them, nor can you train them to trades." The man was a jeweler. He had been on the educational board in the large town in which he lived for thirty-five years. I said to him, "Has there ever been any attempt in your town to take young Indians into your public schools to try to find out what they are capable of in a contest for knowledge with the children of your town?" He said that he did not know of any young Indians ever in the public-school system; that the State had given them a public-school system of their own on their reservations, and paid the teachers; that the great difficulty was to keep up the attendance in these schools. I asked if there was any prejudice against Indians attending the public schools. He said he thought not, but that the State had been paying to keep up these Indian schools, and they were conceded to be failures. I said, "You have no right to judge of the possibilities of Indian education until you have given the young Indians the same chance to get an education that you give the white youth. Now you are a jeweler. You have had many apprentices in the years in which you have carried on business. Did you ever take a young Indian as an apprentice to see whether, if he had a really good chance, as he would have in your store, he might not learn to be a jeweler? Have the other business men of your town taken young Indians into their shops and business, and attempted to teach them, as they do white youth?" He admitted that no such attempts had been made by any of the artisans or business men of his town, and that he himself had never once thought of doing such a thing. "Then," I said, "you have no right to condemn the young Indian as incapable. He is entitled to just the same opportunity to acquire an occupation that the young people of our own race have; and if he then fails, there may be some show of justice in sending him to the rear."

Greater thoroughness in teaching and more prolonged effort may be justly considered as necessary when the individual has had a bad start. Very little is to be conceded to generations of savage ancestry. Heredity of birth is not of most importance. Heredity of environment is the potent factor. Carefully raised and well civilized white men, through savage and worthless environment, easily become degraded, savage, and worthless. So too, savage born and rudely raised red men become civilized, enlightened, and useful, through well civilized and enlightened environments. It is but a step either way.

From long experience and wide observation I have come to have little patience with a science of ethnology that consigns any man or race of men to generations of slow development. The world is full of evidences to prove the contrary. To make an independent and industrious individual man, the individuality and personal responsibilities of the subject must be recognized in every part of his preparation. He must not, because of birth or for other reason, be tied to any set of individuals. Thank God for the American principle which recognizes the independence and individuality of every man, and does give to so many of our divers and vast population such individual opportunities; and for that great typical American and poet who so quaintly and truly stated it all when he said:

> "The great American idee
> Is to make a man a man and then to let him be."

R. H. PRATT

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III

THE PLACE OF ART EDUCATION IN GENERAL EDUCATION[1]

One of the greatest gains made during the half century now closing is the clearer insight of men into the meaning and the implications of evolution. There was a time when the newly discovered facts of the past history of the earth and its creatures, seen dimly and without much relation to other facts, staggered all but the most courageous minds with the vastness and ominousness of the problems they involved; but, as years have gone by, men have come to see the same gigantic and enigmatic facts in clearer mental perspective and under brighter light. Now the philosophy of evolution, as Dr. John Fiske and others clearly proclaimed it years ago, and as Henry Drummond has lately so admirably reaffirmed it in his work on the *Ascent of man*, is the common possession of most thoughtful people.

This evolutionary history of the world of man is only the scientific, detailed tracing out of the means and ways by which there has been brought about the stupendous fact of man's place in the scale of creation, which keen philosophic speculation had long ago made him conscious of, even while unable to understand or account for it. The theologian of three centuries ago meditated in the older Hebrew phrase:

> When I consider the heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; What is *man*, that thou art mindful of *him?*

But to-day in the light of evolutionary science, the thought takes a different accent:

> When I consider the heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; What *is* man that thou *art* mindful of

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[1] An address delivered before the Department of Art Education of the National Educational Association, at Denver, Colo., July 12, 1895.

him ? . . *Thou madest him to have dominion over the works of thy hand; thou hast put all things under his feet!*

Whichever road we travel—the old path of ontological speculation, or the new path of scientific investigation—we come out upon the same intellectual hilltop, namely, the thought that man, as a physical being, is the consummate product of material creation, while, as a spiritual being, he is the appointed master of material creation and the beginner of a new world of spiritual growth and spiritual creation.

The essential, distinguishing fact about him is his more direct relationship through his personal feelings and desires to the Divine, that is, to the eternal spiritual reality of the universe, than exists in the world of matter around him, which can only passively reflect the Divine.

I shall assume that we agree to start out from this standpoint in considering the question before us to-day. For, in order to think to any real purpose about the place of art education in general education, we should first obtain a clear idea of the relation of education itself to human development, and then the place which the arts of the race—literature, music, painting, sculpture, and architecture—hold in the development and training of spiritual man.

The first proposition that I have to offer you is one upon whose acceptance or rejection the general character of the whole scheme of public education must logically depend. It is as follows:

PROPOSITION I—That the human soul is a self-acting spiritual entity, which is more completely a revelation of the divine spirit behind all which is, than is shown in the material world; and that this soul or spiritual entity, when properly developed, dominates man's physical powers, making them subservient to itself.

We hear much in these days about the human soul as having no demonstrable existence *per se*, but being merely the sum of the material forces of the universe, and as possessing only such powers as are induced in it by the play of these material forces upon the bodily organism. This standpoint is practically assumed by that portion of modern empirical psychology which has been aptly described as "psychology without a soul." Ribot in his work on *German psychology of to-day* accepts this phrase ("psychology without a soul") as fairly describing, in its negative aspect, that new psychology which confines itself to studying forms and conditions of mental action without any regard to the question of what the soul is or even whether there be a soul, and which treats psychic forces as merely differentiations from the material forces studied in physics, chemistry, and animal physiology.

Of course it cannot be claimed that the mind or the soul is independent of the physical organism. We cannot conceive of the human mind as being able to annul the laws of external matter. What I wish to claim is simply that the mind, being an entity in itself, has a certain power of control over that very material mechanism (the brain) whose conformation and functions condition it; and that it has also a certain original power of combining with and taking advantage of the forces of the material world so as to modify their actions and transform their applications.

Nor is it intended to deny that the senses are the appointed gateway through which, and only through which, the things and the forces of the outside universe can come near to us to influence us, and give our minds material to work with. What I do wish to remind you of is the fact that the spiritual entity behind and above all the man's sense-organs, *that to which matter appeals through sense-impression*, is the thing of first and greatest importance.

You remember the famous aphorism of Leibniz: "There is nothing in the intellect which was not previously in the senses —except the intellect itself!"

As a matter of fact, the stoutest champions of the theory of soul as a combination of differentiated physical energies cannot keep their footing on their slippery ground. They cannot explain or indeed fully express their own theory without falling back upon assumptions which are inconsistent with that theory.

The fact is, the whole scheme of experimental psychology—

which aims to reduce mental phenomena to unmediated physical energies playing through matter, and so to dispense with self-activity in the intellectual life of man—is (as Professor Ladd has pointed out with such clearness and vigor) based wholly on an assumption of the self-active intellect itself, *i. e.*, on the purely mental hypothesis of the existence of atoms and molecules, through which the primal energy can transmit and manifest itself. And this hypothesis is a pure synthesis of the mind. So we have the paradox of human beings denying that the human mind has any real essential existence as a self-acting entity, and yet asserting that the ultimate basis of all so-called mental phenomena is traceable to physical forces acting in certain minute units of matter, whose very existence is, after all, merely a convenient conjecture of this dependent physical mind itself![2]

We must remember that this question as to whether the soul is a self-acting entity or merely a higher differentiation of molecular energies is more than just a curious problem for the biologist and the metaphysician.

It has a distinct bearing on the problem of child education. If mind development is taken to be merely a matter of automatic transformation of sense-activity into thought-activity, the general spirit and plan of education (which aims at mind-development) will naturally be quite different from its spirit and plan when it is conceived of as an appeal to a spiritual entity, a self-determining *ego*, with powers both of assimilative and creative self-activity, capable of being

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[2] "When we have once separated matter from thought, when we have called matter what is perceived, in opposition to thought or what perceives, we must not eat our own words or swallow our own thoughts by saying that, for all we know, matter may think or mind may be touched and handled.

"From this point of view I call materialism no more than a grammatical blunder. It is the substitution of a nominative for an accusative, or of an active for a passive verb. At first we mean by matter what is perceived, not, indeed, by itself, but by its qualities; but in the end it is made to mean the very opposite, namely, what perceives, and is thus supposed to lay hold of and strangle itself. What causes the irritation of our senses is confounded with what receives these irritations; what is perceived with what perceives, what is conceived with what conceives, what is named with the namer. It is admitted on all sides that there never could be such a thing as an object, or as matter, except when it has been perceived by a subject or developed to various degrees according to the individuality of that *ego.*

Let me not be misunderstood as underestimating the value of contemporary physiological psychology to education. Understood in its right relation to educational problems, it can be and is of great practical assistance in educational work. The actual effect of bodily conditions on mental activities is nowadays being better understood than ever before. Our practical appreciation of this understanding is shown in improved systems of ventilating, heating, and lighting schoolrooms, and in thoughtfully planned courses of physical culture. The actual importance of sense-experience, as basis and material for mental activity, is nowadays better understood than ever before. And our practical appreciation of this understanding is shown in the great movements for form-study, for manual training, and for the experimental study of natural science. The more we understand of the subtle interrelations between the physical and the mental, the more directly we can go to the point in classroom teaching without so much futile misdirection of effort as has often been inevitable in the past. But the danger involved in this new enthusiasm for physiological psychology, or the study of "consciousness content-wise," is the danger lest it be supposed to cover the whole educational problem when it really covers only the lesser half of the problem. Educators to-day are in danger of overlooking that larger factor "consciousness function-wise," in the child, which, though it cannot be measured or weighed or

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a mind. And yet we are asked by materialists to believe that the perceiving subject, or the mind, is really the result of a long continued development of the object or of matter. This is a logical somersault which it seems almost impossible to perform, and yet it has been performed again and again in the history of philosophy." —F. Max Müller, *The Science of thought.*

"While mind and matter may both be called substances, they are different kinds of existences. We know them by different organs: the one by self-consciousness, the other by the senses. Again we know them as possessing altogether different properties; the one as perceiving, reasoning, feeling, willing; the other as extended and exercising energy. The properties of the one cannot be predicated of the other. Thinking and feeling have no place in that stone; nor have softness, hardness, or gravity in our souls."—Dr. James McCosh, in Preface to Ribot's *German psychology of to-day.*

tabulated in any sort of psychological statistics, has more weight in the determination and direction of mental activity than all physical and material factors combined. Practical education should not be suffered to fall into the mistaken, exclusive extreme into which it seems to be drifting; where circumstance and environment, acting automatically on the brain, are reckoned as all-effective, and the elements of personal effort and personal responsibility on the pupil's part are hardly recognized. This extreme is, of course, easily comprehensible as a reaction from the old-time formal teaching. But either extreme is bad. And as a safeguard against the current tendency to suppose that sense-contact with the things of the natural world may be trusted to solve the whole problem of right spiritual development, I feel that a firm stand should be made for the recognition of the individual soul with its self-activities, responding to but not derived from the material forces of nature, as of the first and greatest importance in educational psychology and in practical educational work.

My second proposition is:

PROPOSITION II—That man, by virtue of this self-acting soul, becomes, in his highest estate, not only a transformer of the material conditions which surround him, but also an actual creator of new spiritual values of an altruistic character; hence his arts.

I can take time merely to suggest in the briefest fashion how man is a transformer of the material conditions round about him, and how his activities are imbued with the altruistic character; how he, and he alone, in contrast to all other living creatures, sets to work with conscious and deliberate foresight to change those very material facts which, to a certain extent, experimentally condition his range and mode of inward life; and how his activities, crystallized into arts, have changed the face of the earth and the semblance of many of its creatures into something quite unlike their original estate, making both nature and her creations immensely more contributory to his own well-being.

Man's activities may be classified into two divisions, the useful arts and the fine arts.

The useful arts exercise his creative powers chiefly on but one plane of his existence and that the lowest, namely, the physical. While they mark a nation's upward growth to a certain limited extent, they do not of themselves embody all of our race experience, nor even the best of our race experience.

The fine arts (poetry, music, painting, sculpture, and architecture) are the forms in which the higher life of man embodies itself. It is to these fine arts that we always have to look, in order to learn in what way and to what degree a people have climbed up above the level of mere animals, clever enough to secure good things to eat, effective shelters from the weather, and convenient coverings for their bodies.

In a certain sense it may be said that there is a large part of the best of our race experience which never gets embodied in any tangible material form at all, but acts for the creation of new conditions rather than new things; refining and elevating the quality of personal character and daily life, but never shaping itself into any explicit forms of art creation. It is not quite true that these particular spiritual energies are unmet with in the fine arts—for, in indirect ways, the most commonplace toil helps make the work of art possible (we all remember our nursery stories of how the farmer and the miller help prepare the child's breakfast for him),—and, in a still higher sense, every noble inward life helps create a more healthy spiritual atmosphere for all other men to breathe.

But the fact remains that if we would direct our thought to the definite, tangible records of man's higher life, we must look for those records in the various forms of the fine arts.

Creative activity which brings forth the useful arts is service rendered in laying the foundation of material civilization. Creative activity which brings forth the fine arts is service rendered in building the superstructure of spiritual civilization. Man is so constituted, and human society is so constituted, that the higher powers and activities of the race naturally and necessarily ultimate in the fine arts as the very condition of ever-developing character.

Now if we accept the doctrine of evolution, man's soul or spiritual self is the latest and fullest revelation of the Divine cause of all that is; and this spiritual self coexists with the animal frame and the animal nature which constitute physical man,—the climax of physical creation. A constant struggle is going on between his animal nature, which is inherited from his animal ancestry, and which works for self, and his spiritual nature, which is altruistic and which is impelling him forward to work for others. Man's arts are at once the evidence and the result of this conflict.

This is the unanimous affirmation of science, history, and religion.

My next proposition is:

PROPOSITION III—The history of civilization is the record of man's progress in the creation of spiritual values through the subjection of his own animal nature and surrounding material nature to the service of his spiritual needs and ideals—hence the world of art. For the arts of man are not merely incidental to civilization. They are the supreme products of his creative spiritual activities, the condition and promise of higher civilization.

It cannot be too strongly emphasized that art is not a mere incidental phase of the life of man. Some people have an idea that it is so; that it simply happened in successive ages that people spent their playtime in building with blocks on a large scale, making "stone dolls," and composing tunes, rhymes, and fantastic tales—occupations whose remains are well enough to interest the idler of to-day, but which have no solid significance for practical people.

This notion of art is as far as possible from the truth of the matter. The fact is that in every age man's creative energies have embodied themselves in art forms in order to satisfy the irresistible divine instinct of creation within him, and make a way in which to share with his fellows his inward personal experiences.

The fact that we ourselves stand to-day where we do stand in the progressive march of civilization is due in no small measure to the earlier fact that generations of men before us, who lived and loved and suffered and hoped, and who wrought their own wonderment and desires, their aspirations and their hopes into art forms, have bequeathed to us their arts as their richest and most beneficent legacy. We hold this legacy now in the form of the world's great epic and lyric poems, and in its fiction and dramas, instinct with human passion and human aspiration, peopled with personalities of man's own imaginative creation, even more real in their influence to-day than the shadowy names of history. We hold it in the form of the great treatises on philosophy, government, and the sciences, the very condensation and crystallization, as it were, of the human intellect. We hold it in the world's Bibles, the legacy of the religious thought of the race. We hold the legacy again in the form of the worlds' great music—the symphonies that still make our world palpitate with exquisite harmonies once conceived by human genius—the oratorios and operas, and the songs that, like unquenchable torches, kindle the souls of each successive generation of human kind with fires of joyousness, of patriotic ardor, of religious ecstasy.

And we hold the legacy yet again in the form of monuments and temples, cathedrals and majestic colossi, eloquent of the questionings and longings of souls facing the great mysteries of life and death. We hold it in the form of treasured remains of sculptures, eloquent of old-time insight into the divineness of beauty and old-time delight in such insight. We hold it in the form of the world's great paintings, eloquent of all man's widest range of interests and sympathies, of his love for the good and the right, of the gradually clearing vision which has enabled him to see the Divine in nature and the still higher manifestations of the Divine in humanity, and to make the vision manifest to all mankind.

On another occasion I shall discuss the bearings of art education upon the labor problems of the day, and through labor upon all the interests of social well-being. On this occasion I can only remind you of the immense significance of art from the economic point of view.

Now, standing as we do to-day in the possession of this art legacy from the men of the past, can we rationally minimize it, and, as many of the educational leaders demand, consider the child merely as a particularly high differentiation of physical energies, the passive subject of nature, molded and played upon at nature's mercy? I tell you, Nay. We must see and own and practically act upon a truer conception of the mind of man, and upon such a larger vision of the place of man in creation's scale as was so strongly brought out by Dr. John Fiske at Harvard two weeks ago, in his Phi Beta Kappa address. Dr. Fiske then gave utterance to words that are to be forever memorable in the great discussion upon which thinking men are now entering with reference to man and his destiny in the light of evolution, and he has kindly sent me his exact words for use on this occasion. In speaking of psychical man and contrasting him with all that preceded him, Dr. Fiske said:

> The physical variations by which man is distinguished from apes are not great. His physical relationship with the ape is closer than that between cat and dog, which belong to different families of the same order; it is like that between cat and leopard or between dog and fox, different genera in the same family. But the moment we consider the minds of man and ape, the gap between the two is immeasurable. Mr. Mivart has truly said that, with regard to their total value in nature, the difference between man and ape transcends the difference between ape and blade of grass. I should be disposed to go further and say that while for zoölogical man you cannot erect a distinct family from that of the chimpanzee and orang, on the other hand, for psychological man you must erect a distinct kingdom; nay, *you must even dichotomize the universe, putting man on one side and all things else on the other.*

It is this stupendous sense of the soul's reality—that is, its individuality and its self-activity—that we need to emphasize in these days of talk about the soul as merely a derivation from sense-activities.

Let me ask all those who believe there is nothing in the mind but the product of the senses, Whence came these arts of man? Can you assume for their existence anything less than the existence in the mind of man of a creative power superior to the physical forces that surround him; a power which appropriates through the action of the senses these physical forces and transforms them for its own spiritual ends?

I desire to leave this point with emphasis on the fact that these arts of man are not mere incidents in his development; they are the sum of his existence, that "toward which the whole creation moves."

My next proposition is:

PROPOSITION IV—That every child is born heir to two world environments (the material world of nature and the spiritual world of man), and also the possessor of aptitudes for ever expanding creative activities of his own.

We have seen that man is surrounded by two great world environments. These two world environments act upon the child, each in its own way. The material world of nature, the world of cloud and rock, of multitudinous plant life and swarming animal life, makes constant appeal to the new human being, through his physical sensibilities and physical interests, as one who is the crowning product of its own marvelous cycles of evolutionary energy. On the other hand, the spiritual world of man, the world of the arts, makes constant appeal to the new human being, through his spiritual susceptibilities and spiritual interests, as one who is capable of all that the race is capable of, and, as a new being, has endless future possibilities of personal activity. The upward growth of this new human being we find dependent upon the relation or balance between his responses to the influences of these two world environments, and it is here that we, as educators, should take careful note of how these two environments affect the child. His animal nature, obedient to the laws of natural evolution in the physical world, is absorptive, selfish. It grasps. It appropriates for the good of self. This is nature's provision for the perpetuation of the race. His spiritual nature, on the other hand, obedient to the laws of spiritual life, is creative, altruistic. It gives. It makes for the good of others. This is the divine provision for the development of humanity. In so far, and in so far alone, as this spiritual response to, and utilization of, the influences of his spiritual environment predominate over his submission to the influences of his material environment, he grows toward that high human destiny which we can but faintly begin to forecast.

If it were true that children were only little animals, subject to nature's laws and possessing minds that work merely automatically under the outside stimuli of natural phenomena, it would be well enough to do as many modern educators advocate—simply surround the child with pleasing natural objects and trust their sensuous attractiveness will insure attention and observation, and that these will somehow of themselves evolve desire for what is truly best, and secure energetic action along right lines, toward high ends.

The unfortunate fact is, however, that, unless we make a strong appeal to children through the spiritual side of their nature, they are liable to respond only in terms of the animal. As most practical teachers know, we are likely to be brought up standing by the child's frankly materialistic measures of the universe. Those of you who have read the recent autobiography of Frances Power Cobbe will recall her experience when, returning to her country home for a visit, after several years of absence, she met a grown-up young man, who had been a pupil in the little village school organized and enthusiastically taught by herself.

"Well, Andrew," said Miss Cobbe, "how much do you remember of the lessons you learned at school?"

"Sure, miss," said Andrew, "I've forgot them entirely."

"Oh, but certainly you must remember something of them. Don't you remember about the earth and the sun and Mars and the other planets?"

Andrew scratched his head and light dawned upon his countenance.

"Yes, miss," he declared, "I do remember now. You laid them all out on the schoolroom table, and Mars was a red gooseberry and I ate him."

It evidently will not do to trust too far or too implicitly to the "automatic" transformation of sense-impressions into elevated thought.

Jacobi has truly said—"Nature conceals God: Man reveals God!"

Now is there any provision in the universe for helping to insure the predominance of man's spiritual development and his consequent progressive mastership of the material world?

There is: and this leads to the next proposition, one of the most significant of all the great significant truths of evolution:

PROPOSITION V—The period of infancy and youth, when the mind is especially susceptible to the influences of environments, and when the active powers are most easily directed, is a special provision for the unceasing development of man's spiritual qualities and creative activities.

Dr. John Fiske was the first to point out clearly to contemporary thought the important fact that physical evolution had come to an end in the production of physical man; and that further play of the evolutionary process must be sought in psychical man. He also pointed out how this psychical development was conditioned upon psychical or spiritual man making his physical being and his physical environment subject to himself. Dr. Fiske has also supplemented these important contributions to evolutionary philosophy by another of no less importance—one which cannot be ignored in any attempt to place education upon a truly philosophical basis. I refer to his statement that the long period of dependent infancy and youth in the human child, as contrasted with the prenatal provisions for self-existence in the lower animals, is evidence of a distinct plan for the increasing development of the psychic life of the human race, through a special provision in the life of every individual of a plastic condition of mind, whereby the accumulations of ever expanding human experience could be handed over from generation to generation through ever expanding faculties for self-activity in receiving, and then for ever expanding powers of self-activity in creating for the benefit of human life.

I cannot stop to discuss the immense significance of this evolutionary view of the psychic development of the race in its bearing upon education. If Nature's provisions in this respect mean anything, I do not think it will be questioned but that they are intended for the ever increasing development of the psychical or spiritual man rather than of the physical or animal man.

And this leads to my final proposition:

> PROPOSITION VI—Education should be the fullest possible utilization of the plastic period of infancy and youth, not only for cultivating a knowledge of the child's two world environments for his own spiritual enjoyment, but also and emphatically for training to skill in the creative activities along art lines, as the highest contribution of the individual to social well being.

The best education means simply the best utilization of this plastic period of the child's life for the development and training of that in him which most deserves to be developed and trained.

I say "that which most deserves to be developed and trained," assuming that not everything in the child's inherited make-up is of the same value. I take it to be a part of the responsibility laid upon mature men to weigh the various elements of human nature as fairly as they can, and learn to put educational emphasis on the more worthy of those elements. In our lesser task of guiding the progressive development of plant and animal life, we have for a long time made some such selection. Man's effort has been, not simply to help the earth bring forth more flowers and fruit of precisely the same sorts as would grow without help, but to put his intellect and his will in co-operation with the powers outside him, so as to transform existing conditions of growth, to the end that still more beautiful flowers and even more delicious fruits may be brought into existence. Look at our greenhouses, our orchards, and our market gardens for the result. When the task set us is to help work out the Divine purpose in the higher development, not of vegetable or brute beasts, but of new human beings, there is not less but more need that we should consider deeply the animal nature of the child on the one hand, and his spiritual nature on the other, and how the former can best be utilized in the full development of the latter.

The supreme purpose of education, so far as that education lies within our control, should be the development of the child's capacity for unselfish creative activity and for spiritual enjoyment. The development of his other capacities should be treated with regard to the manner and degree of contributing toward this supreme end.

I intentionally use the term creation rather than expression, when referring to the supreme form of human activity, because I believe we ought to keep in mind the thought that the highest activity goes beyond mere "expression" (*i. e.*, the mere statement of what is), and becomes "creation," that is to say, productive action: action productive of new things or new conditions. This is a point that I wish particularly to emphasize, the distinction between expression and creation.[3]

This idea of education as training for creative activity includes all that was best in our earlier notions of the purpose of education. It includes the acquirement of stores of knowledge; for, of course, it is only upon the basis of a knowledge of what *is* that man can proceed to make things or conditions better. It also includes the development of individual power, because, of course, the man who can command himself is the only one who can effectively command matter or force. But the mere "acquirement of knowledge" may be as worthless as the accumulation of gold pieces in a miser's strong box, and the mere "development of power" may be as worthless as the development of power in a finished engine that stands unconnected with any sort of working machinery. The new ideal of education as training for creative activity includes both the effort after knowledge and the effort after power, and adds to these a purpose. That purpose is the active betterment of the world and the progressive elevation of human living.

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[3] This is not a mere verbal distinction. Man's most valuable and lasting work in any direction is work not merely expressing or stating facts that he has become aware of, but actually creating forth new facts. The dramas of Shakspere are not simply transcripts of things that the author knew to have actually happened to particular people. They are a new-crĕated world wherein human character and human life show themselves even more clearly and more truly than most of mankind ever see with their own unaided eyes in the thick of common happenings. The symphonies of Beethoven are not simply expressions of what the composer had heard from winds and birds and running water. They are the positive creations of a self-active soul grasping the laws of harmony that are so faintly hinted at in nature, and embodying forth ideals of tone and rhythm that never had taken form without the composer's genius as a cause. The Parthenon with its sculptures was not simply a marble statement of the laws of gravity and of the religious and political opinions of the Athenian state—a material expression of existing facts. It was the bringing forth into visible and glorious existence of an entirely new creation: something that had not existed in the marble quarry but only in the constructive artistic imagination of man—imagination so strong, so clear, so high in its reach that it could and did command matter to its obedient service.

And this view of education necessitates direct training, not only for creative thought, but also for skill in creating forth the best embodiments of such thought. It implies, not simply keeping the child's senses tickled with a succession of novel and pleasant impressions, which he may express or record in any fashion that comes easiest, but also in giving him such opportunity and such guidance in creative activities that he may gradually attain to self-command in these activities; that he may learn to respect positive standards of technical workmanship, and also learn to hold himself sturdily up toward them in his own endeavors.

Now I do not wish to be understood here as overlooking or as crushing out the element of the child's instinctive interest. I believe we ought to study very thoughtfully and very sympathetically the natural, instinctive interests and desires of the child, in planning and conducting educational work. But I believe that we should study these interests and desires, not just for the sake of following their indications of "the line of least resistance," but also and much more for the sake of *utilizing them as means whereby to lead the child out of his present animal self up to a still higher and better human self.* As grown-up men and women ourselves, we simply must believe that our measures of life are, on the whole, juster and truer than the child's own measure of life; else life itself is a hopeless anti-climax, the dreariest of illusions. The child would naturally prefer to possess a juicy apple to-day rather than to possess

> "The Lord Christ's heart and Shakspere's brain"

next week; but that is no proof that good things to eat are truly more worth while than wisdom and righteousness. No.

What we have to do is neither to impose our own wills arbitrarily and absolutely upon the child's will, nor yet to fold our arms and indolently let him have his head in any direction and to any extent he likes. Ours should be the more difficult but much more honorable task of recognizing his feelings and impulses with ready sympathy; of bringing to bear upon those feelings and those impulses such spiritual influences as will combine with the influences of his natural environment; of developing right powers and habits, and encouraging right activities, and of giving him all the direct positive practice and training that we can give in the typical creative activities, to the end that he may have, not only desire to create, but also power to create forth in terms of art; that, besides having good intentions, he may actually do good work.

The desirability of training a child's powers of appreciating and enjoying what is noble and beautiful in both the world of nature and the world of art, which embodies so much of men's best thought and experience, hardly needs argument. Whether regarded by itself, as providing the child with an elevating mode of occupying leisure hours, or regarded as a step toward positive creative activity on his own part, such training, if wisely conducted by tactful guidance rather than by prescription and rule, may and should be a fruitful means of rounding out character in a wholesome, healthy fashion, and providing beforehand resources of true refreshment and lofty inspiration. Such resources of appreciative power are needed both by the artist and by his public; by the man of leisure and by the humblest workman. Indeed the balance of need lies with the one whose life is to be almost full of commonplace toil, if the improving industrial conditions which give him increasing hours of leisure are to actually make his leisure spiritually profitable to him.

We have hitherto spoken of art in its largest inclusive meaning, comprising all literature, music, painting, sculpture, and architecture. What is true of art, as a whole, in its bearings upon the life of the race and the education of the individual, is true of the particular lines of art which are usually referred to when we speak of art in education. Art in this sense is understood as applying to modeling, drawing, and coloring with their special functions in decoration, illustration, and sculpture, painting, machinery, and building construction and architecture.

Now there are two great obstacles in the way of the establishing of true art education in our public schools:

First. The mistaken and belittling notions about art and art education, which prevail to so great an extent among professed leaders of educational work, as well as on the part of the public.

Second. The unfamiliarity of the rank and file of teachers with the subject-matter and methods of true art instruction.

Now as to the first obstacle, many educators, when they speak or art, mean merely graphic expression, mere diagraming of imitating as a means of stating information. When they speak of art instruction they mean merely encouraging children to make maps, diagrams, and sketches, or models in connection with their lessons in arithmetic, geography, physics, and natural history. These apostles of "free" art practically take the ground that the average child can drop into art, as Mr. Wegg dropped into poetry, "in a friendly sort of way," and that, if he is just given clay, a pencil or brush and a piece of paper and urged to draw or model whatever he happens to see, just as he happens to see it, the result is *art*. This is just like giving the untrained and illiterate child paper and pen, telling him to write whatever he thinks, about whatever he pleases, in whatever way occurs to him, and calling the result literature. Now everybody would recognize the absurdity and futility of this latter procedure. We all know that the child cannot by himself evolve good literary taste and good literary style out of his own crude, desultory thoughts, plus a sheet of paper. There is no such short cut to literature. He must indeed write and write and keep on writing, but above all he must read and be taught what to read; his mind must be fed from the fruitful store of good literature which already exists, the legacy of accumulated ages of human culture.

Now it cannot possibly be our best plan to-day to ignore all the progress of the past, and make each child laboriously work out all over again the whole history of civilization, Dark Ages included, when he ought to be let into his birthright as "heir of all the ages." A broader and clearer appreciation on the part of educational leaders as to what art itself means as a factor in developing the creative power of the child, and what it stands for in social life to-day, is the first requisite for the success of art education as a part of public education. As evidence of how this great subject is ignored, we have only to refer to the reports of the Committee of Ten and the Committee of Fifteen; and further, I am not aware of any scheme of correlation of studies in which the subject is, in any way, adequately recognized.

But I believe a change is coming. Sooner or later it will be seen and practically recognized that what man has done in his arts is to a young mind in the formative stage what fertile soil is to a young plant. And when that time comes, men will no longer try either to cultivate rosebushes on a strictly primeval diet of granite, gravel, and rain, or to cultivate human souls on a strictly primeval diet of nature-study and untrammeled frolic.[5]

They will accept for the children under their care the advantages that lie in being heir of preceding ages, and use these advantages as a means whereby the new life may grow up to still higher forms of personal development and productive activity.

The second obstacle to be surmounted (the imperfect equipment of public-school teachers for carrying on art instruction in the classrooms) will be done away as far as and as fast as the leaders come to appreciate the true nature and importance of art as a fundamental feature of educational work. For the grade teachers of our American public schools are essentially capable and loyal. They are able and ready to learn whatever it is necessary for the good of the schools that they should learn. But they need definite assistance and guidance. Suitably planned courses of study will do much to help; courses arranged not hastily or perfunctorily by people with narrow views of the subject and with slight acquaintance with the experience of others in similar work, but thoughtfully and intelligently by persons who can comprehend both the physical nature and the spiritual nature of the child. Only those who are engaged in this work know how narrow are the limitations that surround them. The best that exists to-day is but a stepping stone to what should be done and what can be done as soon as a better understanding of what art means exists among the teachers. Rightly planned courses of study, reinforced by suitable working materials, and art examples, good and abundant, to which the children themselves may have ready access; the whole interpreted by a wise and sympathetic supervisor, who knows his subject, and who understands child-nature in hearty, affectionate fashion—I tell you, my friends, we have as yet seen only the beginning of what a power art education may and ought to be in the inward uplifting to useful and noble work of the successive generations of children who pass through the public schools of our land.

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[5] I heartily believe in the introduction of various lines of nature-study into the public schools. In city schools particularly such studies are an indispensable help in bridging the chasm between the child and his natural environment, and giving him at least a suggestive glimpse into the marvels and beauties of the natural world. What I do object to is the extreme ground taken by some educators (an extreme precisely opposite to that of the old-fashioned word-for-word text-book memorizing) wherein it is fancied that the study of nature is educationally all-sufficient; that language and number study can be sufficiently and successfully developed as mere incidentals to nature-study, and that drawing, used as the handmaid of the natural sciences, can constitute art instruction. Against this misconception of what art means, and what art study ought to be in a course of education, I believe a strong protest should be made.

To summarize in a few words the points we have been considering, let us remind ourselves:

That evolutionary science, ontological philosophy, and empirical psychology, in their truest interpretations, practically agree in declaring that man is the highest of all finite existences, from which proceed self-acting spiritual powers.

That the arts of man are the embodiment of these spiritual self-activities of the race exercised along creative lines; and that, being thus the highest activities of the highest of all finite existences, they should be constantly utilized in education, if education has for its distinct aim the development of what is best in the child both for himself and for the social life of which he is to form a part.

And now let me say in conclusion that, if I rightly apprehend current educational discussion, many of the schemes of correlation or of concentration, that are being advocated, are based mainly on the consideration of the physical environment of the child, the forces of which play upon the brain through the action of the senses, and hence are exterior to the child. The result of such schemes is to make the child largely the product of his physical environment. As opposed to these more or less materialistic views of education, I suggest that we take as our center of thought the child himself, with a full comprehension of his creative spiritual nature, and then measure the relative values of educational subjects, according as they contribute to the development of his highest possibilities as a creative spiritual being. By so doing, we shall see that the creative activities of the child form the real educational objective, and that the arts of man, as ministering to these activities, should not be relegated to any incidental place in the arrangement of studies, but should be practically recognized as the most inclusive, the most vital means we have for centering our educational effort aright; centering it with all its nourishment and all its inspiration upon the soul of the child—upon the child as the heir and the potential master of the world.

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IV

WHAT IS PHYSIOGRAPHY?

It is not long since that a critic, in *Modern Language Notes*, declared with rather bitter emphasis that a new name was apt to strike terror in the hearts of *οἱ πολλοί*. Perhaps such a sweeping statement may be open to the charge of exaggeration, but it certainly contains more than a grain of truth. A new name with a definite meaning, especially if it be formed on correct principles, is apt to be coldly received, and quite as apt to be supplanted by some senseless combination of stems that does not even possess the merit of a meaning.[1]

Within the past few years a new word has been gradually creeping into use, namely, the term physiography. It was first employed by the late Professor Huxley some twenty years ago to designate more particularly certain features concerning the regimen of the river Thames.[2] As Professor Huxley used it, the word was expressive and admirably selected: doubtless, too, his employment of it was the forerunner to its recent adoption as a permanent expression in the nomenclature of geographic science. But the term has now a much broader and more exact application than it had in the time of its adoption. It is more significant likewise—not because it was used either loosely or inaccurately by Professor Huxley, but because in the interval a new science has been developed out of what were unsorted and uninterpreted fragments. So appropriate is the word, and, moreover, so expressive of the meaning sought to be conveyed, the only wonder is that it should have so long escaped geographers and geologists. The author of at least one text-book has scented something alarming about the word, however. After surveying in a very gingerly manner what seems to him a pitfall, Professor Houston takes precipitate flight, leaving a rather innocent minority report to the Committee of Ten to cover a hot trail. Just why Professor Houston should take alarm, however, is not plain. Had he investigated the application of the word in its more modern sense, he would have discovered that not a few paragraphs in his manual were open to the charge of being physiographic rather than geographic.[3]

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[1] Thus *piano-forte*, gradually shortened to *piano*, has supplanted *harpsichord*, or *clavichord*; *dynamo*, absolutely meaningless as at present found, is popularly used in place of *generator*, a word that anyone might comprehend; while newspaper English is responsible for *electrocution*, a particularly vile composition of stems, used to designate the execution of the death sentence by means of shock.

[2] This name itself is interesting from the physiographic side; it is *tam eisis*, the broad water. In early history the river extended from St. Paul's to the Sydenham Hills, on the Surrey side.

Now, inasmuch as most text-books on physical geography contain material that encroaches more or less on the bounds of physiographic science, it is difficult in a few words to express the distinction between the two subjects; it is still more difficult to draw the line between the latter science and geology. Properly, physical geography includes only the description and distribution of landscape and surface features. Physiography on the other hand treats of the science of earth-sculpture, *viewed in the light of systematic processes.* The participial clause is italicized because it is this after-thought that marks the distinction between Professor Huxley's use of the word and that of its renaissance. Perhaps it would not be far out of the way to say that physiography shows the evolution of surface features; at all events, it will be easier to illustrate this idea by the use of concrete examples than to attempt an abstract definition.

The surface of the earth is modified mainly by two forces. Secular contraction, arising from loss of heat, causes the outer layers of rock to wrinkle and cockle in fitting themselves about a more rapidly shrinking interior; atmospheric and telluric waters are constantly at work removing inequalities of level. In other words, while one force is making the earth's surface uneven, the other is smoothing it off. The operations of these forces, therefore, are the problems with which physiography has to deal. Were these operations constant and uniform, the systematic investigation of them would be comparatively easy and simple. But inasmuch as the opposite is the case, the geographer's task becomes at once complicated and difficult.

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[3] Cui proposita sit conservatio sui necesse est huic partes quoque sui carasesse.

Of the various physiographic agents, rivers are perhaps the ones whose work is most apparent, and, in many respects, the most striking. In physical geography, however, the description of the river stops usually with an allusion to some extraordinary feature, as, for instance, the falls of Niagara, the delta and ox-bows of the Mississippi, the cascades of the Columbia, or the estuary of the Severn. The stream is considered as a fixed and unchanging feature of the present rather than an ever changing panorama of action belonging to the past and the future as well as to the present. In detail, its torrential sediment-transporting and sediment-depositing parts are described, each minutely or generally, as the case may require.

But physiographic processes demand a more philosophical and a more historical consideration than the mere questions of morphology suggest. To the close student of nature, there is that about the regimen of a river that suggests intelligence; the stream is a living thing rather than a mechanical agent. Let us suppose that in some part of the earth a plain has been recently formed; perhaps by the elevation of a previously submerged coastal deposit, perhaps by the drainage of a lake and the elevation of its bed. In either case the natural drainage of the plain presents many difficulties. The water gathers in pools, and a considerable time may elapse before the overflow of these develops into anything like a connected channel. One channel after another may be chosen and rejected. It may not be wisely chosen; or, if wisely chosen, it may become self-obstructed to the extent that to make a new stream-bed is easier than to clear out the one clogged. This is the young or adolescent period of the stream's existence. In time, however, the river reaches a maturity. During this period it extends its headwater ravines and gulches far backward, capturing the contents of less vigorous streams, and, lower down, building a wide flood-plain. If the mouth of the stream does not face the tide, the flood-plain may extend to a considerable distance seaward, forming a delta and, quite likely, a wide strip of made land along the coast. The old age of the stream begins when, after having extended its headwaters backward, cutting out and clearing away everything within reach, it attacks its own flood-plain and clears that away also. Thereafter the river is merely a body of flowing water, practically fixed and unchanging. Possibly, at some time or other, the elevation of its bed may temporarily rejuvenate it, but in the main its life history and development are at an end.

It should be remarked, however, that not every stream exhibits a typical development of these three stages, for in many cases changes in the base level, the uncovering of strata whose dip differs from that to which the stream has adjusted itself, changes in climate, accident—all these may interfere with the normal development and life of a stream. But as a rule, at least two of the stages may be found more or less apparent. Thus, the Red River of the North is a decided example of infancy. It is hardly sure of its channel even now, and in many places it has not passed the pooling stage. The Sacramento, and in many respects the Ohio, are fine examples of rivers enjoying a vigorous maturity—as indeed is the case of most of the rivers of the great central plain. The upper part of Allegheny River especially is noticeable for the vigor with which it is extending its headwaters backward. The Susquehanna of Pennsylvania is equally remarkable, and the various wind gaps—every one an old-time water gap—are testimonials to its ability to capture and appropriate the waters of less vigorous streams.

The St. Lawrence is a fair example of a stream in its old age. About everything that its flood could remove has long since been carried away. This is true also of many other rivers of the eastern part of Canada. Most Canadian rivers, it may be remarked, were greatly modified during the Glacial epoch.

Let us now consider the results that may obtain when an additional factor, a progressive change of level, is introduced into the problem. We will suppose that a surface fairly diversified with mountains, and generously supplied with rainfall, is gradually losing its altitude by subsidence—sinking little by little below sea level. Through the action of atmospheric moisture the relief features have lost all their boldness of contour, and have been worn and rounded into more graceful forms. The products of erosion have not only filled the valleys, but they have also been deposited offshore, in time building a wide coastal plain.

But the gradual subsidence results in even a more radical change. The coastal plain disappears; the piedmont lands are buried; the valleys between the ranges are flooded; and the ranges themselves become either skeleton peninsulas, or else are cut off from the mainland by the encroaching sea. The rivers are robbed of their importance as well as their watersheds. The lower part—the trunk of each—is drowned, along with the coastal plain; instead of a great system of tributaries, all gathering into a single drainage-channel, there results a number of short mountain torrents. So the process goes on until the whole river-system, its dismembered headwater streams excepted, is covered by the littoral waters of the ocean.

But subsidence and elevation are concomitants and usually alternate one with the other at irregular intervals. Sooner or later there occurs a reversal of movement, and, with intermittent periods of rest, a gradual uplift takes place. The old coastal plain, considerably increased in thickness by marine and alluvial deposits, little by little emerges from the sea. Nearly or quite all the old, buried stream-channels are recovered by their former occupants, and most likely, owing to slight structural changes, new or consequent streams will be formed here and there. Sooner or later some of these will be captured and absorbed by the older revived streams, but in many instances the younger stream, being the more vigorous, will seize the older and permanently acquire it. But in any case the dissevered members gradually effect the resurrection of the trunk-channel, and the temporarily isolated fragments finally develop into a river system.

The streams have then reached a new stage of maturity and begin on a new life's work, namely, the gradual and systematic removal of the fresh stratum of sediments which were deposited on the coastal plain while it was submerged. The process may be long continued, and perhaps it may never be fully completed; but it is at least systematically carried on. The tributary stream-channels are extended backward and laterally, pushing into the territory of one another until the plain is dissected into isolated mesas, and finally even these are removed.

The physiographic history of a lake, though perhaps not so complex as that of a river, is equally important in its bearings upon general geography. Let us follow the history of one of a common type. A river finding its channel obstructed, either by its own sediments or by secular change in the level of its bed, breaks through its banks and pours its flood into a basin-shaped depression, thereby forming a lake. Either the basin fills until the supply of water just balances the loss by evaporation, or else the level of the water rises until it overflows at the lowest part of the rim; let us take the latter case. From the moment the lake comes into existence powerful agents at once systematically begin their work of destruction. In the first place the inflowing streams are constantly bringing down considerable amounts of sediment in their floods, and this, the moment their floods reach the still water of the lake, is quickly deposited along the margin, forming an array of mud-flats, spits, bars, hooks, and deltas, as the case may be. The outflowing stream is equally vigorous in the destruction of the lake. It cuts the notch in the rim deeper and deeper, thereby lowering the level of the water. Vegetation, likewise, contributes largely to the destruction of the lake. Algæ, species of sphagnum, and various other bog plants margin the shore and extend outwardly from it. Not only do their dead and decaying remains accumulate along the shallower portions of the shore, but they are not less effective in gathering and holding the æolian detritus that is constantly blown upon their surface. So between the deposition of sediment at the head of the lake, the cutting away of the rim at the lower, and the marginate accumulations of vegetable remains along the shore, the lake sooner or later disappears. It is not very many years ago that the idea of a buried lake-basin was regarded as a novel feature by geologists; in later years, since it has become the custom to approach such problems from the physiographic side, the discovery of obliterated basins no longer creates surprise.

In a like manner, one might follow the life history of a coast lagoon, from the time that a wave-formed bar begins to block up a cove or an estuary. The various stages of sound, lagoon, salt marsh, and pocoson are too familiar to require description here. So, too, one may follow the gradual formation of mountain folds from the time that abnormal accumulations of sediments are piled along continental shores until the subsequently formed plications are degraded almost to base level by the various weathering forces.

The foregoing examples illustrate in a general way only the mutual inter-development of geology and physical geography. It has been objected by several prominent educators that this study belongs to geology and not geography; to the college and not the elementary school. And yet one of the most vigorous objectors advises out-of-door observations in almost the same breath in which he objects to physiography in the elementary schools. Such an objection is merely a confession of ignorance. The six-year-old child who is led to observe that the rills flowing in wheel-ruts widen them and carry the washings to the nearest mud-puddle is studying a problem in physiography just as certainly as did Director Powell and his staff of geologists when they wrestled with the problems of the arid region. The difference is one of degree only. One might as well argue that geography should not be taught in primary schools, because certain departments of the subject, as economic geography, properly belong to the university. To say that physiography should not be studied in the elementary schools is to insist that pupils shall not become acquainted with the fruits of modern geographic discovery. One might just as reasonably claim that pupils should not be permitted to study physiology because it is a science belonging to the medical school.[4]

That certain aspects of physiography belong to geology, rather than among the topics conventionally included in geography, is certainly true.[5] Some of the problems involved are altogether too abstruse for any except advanced post-graduate work; but the fundamental principles are not so difficult that they cannot be understood by ordinarily bright pupils of the elementary schools. The only question is, how and in what manner shall the subject be presented. The Committee of Ten assumes that the study belongs upon a higher plane than that of physical geography; and, looking at the subject from a purely scientific side, the idea of the Committee is a correct one. As a science, physiography deals very largely with the abstract, and its place is therefore among collegiate rather than secondary or elementary studies.

But if it was the intention that no aspect of the science should be presented in the elementary and secondary schools, the plan of the Committee is certainly open to strong criticism. While it should have a place, and an important place too, in the curriculum of college studies, it should have an equally important place in the lower schools. It is not necessary that text-books on the subject should be placed in the hands of the pupil; indeed, it is not advisable that text-books[6] on the subject be used in the elementary schools at all. The correlation of physiography and the ordinary descriptive geography that is now taught in schools is very much like the correlation of algebra and arithmetic. Certain algebraic processes intrude themselves in a large number of the problems found in arithmetic. The unknown quantity is apt to present itself when least expected, and the teacher is driven to many expedients in a hopeless attempt to disguise it. The wise teacher, however, is not afraid to use an x or an $x + y$ when the occasion demands, even in an arithmetic class. In other words, while algebra, being an abstract science, comes theoretically *after* arithmetic, many algebraic processes come *with* arithmetic and should therefore be taught as a part of that subject.

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[4] Crass, obstinate ignorance is generally at the bottom of such a line of argument. It is not many years since the writer heard a physician of local celebrity inveigh against the modern science of bacteriology as one of the humbugs of medical science. A few weeks afterward this practitioner went directly from a puerperal fever patient to officiate at the operating table. It is not necessary to specify the result.

[5] For example, the problem of the deformation of the geoid, as elaborated by Mr. Woodward and the late William Ferrel.

[6] The name already appears as a title of several text-books, but a cursory examination is sufficient to show that the volumes themselves are innocent of any connection with the modern idea of the subject.

Now the relation of physiography to school geography is very much like that of algebra to arithmetic. Certain physiographic processes obtrude themselves at almost every step in ordinary geographic studies and in political economy. They must therefore become a part of the pupil's stock of knowledge. The text-book in geography that is to become useful in the future may not contain a well-arranged course in physiography, but must be based on physiographic principles, and the subject must be developed on physiographic lines. No revolution in courses of study is necessary to bring about a revolution of results in geography teaching. The only necessary requirement is that the teacher must educate himself, by reading and field-work, in the higher aspects of geographic science. The rest will come of itself. Moreover, even in the elementary schools, field-work or out-of-door lessons must become a regular part of the course. These are just as essential to the proper study of geography as laboratory work to chemistry and physics. Not all the field-work needs be actual out-of-door work: there are many instances in which photographs and the now well-known half-tone illustrations may be advantageously used. In the more advanced grades the study of physiographic scenery will gradually develop into the art of interpreting physiographic processes from maps. Except to the few teachers who have been trained in German schools, or in the more recent courses of certain colleges, this art is unknown in American schools. There is nothing especially abstruse or difficult about it, however, and to a certain extent it may be acquired even by younger pupils.[7] In any case, the study of good pictures and maps is a most excellent and instructive supplement to actual field-work. Any feature of any science is best appreciated and comprehended when studied by comparison.

For several years a gradually strengthening current of opinion has been settling toward a very definite quarter of the educational horizon. It is not unlikely that, in a modified form, the German methods of instruction will ultimately prevail in this country. In the first place physical geography, in its physiographic aspects, will be the structure upon which geography teaching is based. Observational lessons and field-work will have an important place, but they will be based upon the great principle that geographical processes are not to be studied merely as events of the past; on the contrary, they must be regarded as progressive and continuous operations of the present and the future as well. Doubtless the old-time theological ideas of cosmology are more or less responsible for many of the notions about "creation"; but the student of cosmography will readily observe that creation is quite as much a thing of to-day and to-morrow as it was of the epoch when the earth was "without form and void."

The text-books now most needed for both primary and grammar-school use are books in which the subject is developed from the physiographic side. It is unfortunate, however, that, at the present time, such a series would be attended with not a little risk. The normal schools[8] and the army of educational reviewers, upon whom the life and existence of a book depend, are too strongly wedded to the antiquated delusions of the past to receive such a series with favor; and it is hardly to be expected that a publishing house will expend one hundred thousand dollars or more in exploiting a series of books doomed to certain failure.

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[7] In this matter the writer speaks from personal experience.

[8] The writer has in his possession a letter from the principal of a well-known normal school who flouts the idea that any training is needed in teaching geography, or that field-work is essential for the pupil. In his opinion all the geography required can be obtained from the railway folder.

Nearly a score of years ago Professor Arnold Guyôt[9] gave a very vigorous emphasis to the plan of beginning the study of geography with an investigation of the physical geography of the schoolyard. In the main this idea is a correct one, and at that time the conditions were ripe for a favorable reception of the idea. The idea of Professor Guyôt took a vigorous hold, and soon became a popular fad. It was never really understood as a principle, however, and although a number of text-books were prepared on that line, they were compiled by editors so grotesquely incompetent for their work that the books were soon forgotten. And a reason is not hard to find. A teacher who carries his pupils through a brief course of elementary physiography, using the school district as a basis of study, must possess something more substantial than a method and a molding board. It requires not a little training in field-work on the part of the teacher; but a wide range of reading in modern geological literature is essential as well. In other words, the laboratory method must be applied to the study of physiographic geography, if the work is to be well done; the teacher, moreover, must possess a better knowledge of the subject than can be acquired by the perusal of an ordinary school text-book.

The second and more practical side of physiography is its economic aspect, that is, the geography of commerce. Not only are the principles of physiographic geography closely interwoven with those of political economy, but the latter may be considered as the industrial department of geography. It is the fortuitous distribution of coal and iron, of cultivable lands and rainfall, that makes great nations; statesmen, powerful armies, and impregnable navies are comparatively trivial matters. The future of the North American empire is wrapped up in the wheat fields of the Mississippi Valley and the mineral deposits of the highlands. The narrow gap through which the Mohawk flows is a physiographic incident of which Greater

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[9] It is well to bear in mind that the books bearing the name of the eminent geographer were not written by him. Some of them were written since his death. The *Physical geography* is the only authentic text-book of Professor Guyôt's.

New York is the result. The deficiency of a few inches in annual precipitation relegates the whole region of the plains to the cattle herder, and reduces its capabilities of development ninety per cent. A canal across the Isthmus of Panama, or through Nicaragua, by bringing San Francisco nearer to London than Calcutta now is, would open European markets to the food stuffs of the Pacific coast of the United States, and modify the commerce of the whole world.

It is the consideration of questions of this character that places the science of geography among the *Brodwissenschaften*, and brings political economy within the domain of physiography. Indeed, whatever the practical man of commerce may choose to omit from the studies he considers necessary for a business education, economic geography in its physiographic aspect is not one of them.

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Other important articles on various phases of Geography and Physiography have appeared in the EDUCATIONAL REVIEW, as follows:

The teaching of geography, by Professor William M. Davis (May and June, 1892); Geography in the European universities, by Hugh R. Mill (December, 1893); The status of geography teaching, by J. W. Redway (January, 1894); Applications of physiography to history, by J. W. Redway (November, 1894); Geography as a school subject, by Professor C. A. McMurry (May, 1895).

V

THE CORRELATION OF STUDIES

In the discussion at Cleveland last February, as well as in articles since, it has been positively asserted that the Report of the Committee of Fifteen has no allusion to the fact that the different sciences have a relationship with one another; that it does not, from principle, favor the idea of connected thought. Colonel Parker said at Cleveland that "the Herbartian doctrine and all other doctrines of concentration are ignored in this report, in their fundamental essentials." De Garmo declared "the text was there, but the discussion of the text was lacking." Dr. Harris himself contributed to spread this view of the report. He said at Cleveland that "the word correlation had no business to mean what the Herbartians make it mean," and asked "Why should they spring this use upon me?"

In an article since, Dr. Harris says: "Other than this essential correlation (dicusssed in the report under the title of educational values), there is, of course, only artificial correlation, and this," he adds, "was treated with sufficient thoroughness." In the report itself mention is made of what is called correlation by synthesis, and the German Herbartians are criticised for using *Robinson Crusoe*. The subject is then dismissed in these enigmatical words: "Your Committee would call attention in this connection to the importance of the pedagogical principle of analysis and isolation as preceding synthesis and correlation. There should be rigid isolation of the elements of each branch for the purpose of getting a clear conception of what is individual and peculiar in a special province of learning." Later, reference is again made to a species of faulty correlation wherein the attempt is made to study all branches in each, misapplying Jacotot's maxim, "all is in all." In letters to different school journals Dr. Harris has since given the very much needed explanation that he meant this analysis and isolation in the sense of Herbart's first "formal step," which also is called analysis. He adds that the Herbartian "formal steps" are approved and adopted by the Report of the Committee of Fifteen.

The principle of isolation applies, however, not where the report seems to indicate (viz., in the plan for the curriculum), but in the daily lesson, and there only at one stage. Isolation is for the concrete details as such, because the essential nature of the concrete consists in being distinguished from something else. It loses its identity and individuality in proportion as it is grouped or classed or associated with other things. Correlation or association is for the abstract or conceptual as such; for its essential nature consists in comparison, classification by common characteristics, and, finally, the naming of the concept embracing these common qualities. But we must remember that concrete and abstract are only relative terms. What the mind operates with in all its thoughts partakes of the nature of both. The same idea may be a concept embracing subordinate percepts, and yet at the same time along with other similars it may enter into the formation of a higher concept.

Ever since the Report was published the war of words has been going on over the meaning of the name correlation. Several articles by prominent educators have since appeared, devoted entirely to a discussion of the meaning of the word. Meanwhile, what help are we teachers getting from all this? We want to know whether the wise men of experience think it desirable to interrelate the subjects of the curriculum and make one re-enforce the others, by letting the content-studies furnish material for the form-studies to work upon; and if they think well of such a proposition, we want to know how they would carry it out.

The Committee had the subject squarely before them, as shown by the questions for discussion sent out to various persons throughout the country soliciting contributions to be used in the preparation of the report. The following are the ones referring specifically to my subject:

"5. What should be the purpose of attempting a close correlation of studies?

"(*a*) To prevent duplication, eliminate non-essentials, and save time and effort? (*b*) To develop the apperceiving power of the mind? (*c*) To develop character? A purely ethical purpose?

"6. Is it possible on any basis to correlate or unify all the studies of the elementary school?

"7. If not, may they be divided into two or more groups, those of each group being correlated?

"8. Is there any way of correlating the results of work in all the groups?"

Here we have the questions squarely put, and the word correlation is used in the sense in which perhaps nine-tenths of those who think and read about the subject have recently heard it used.

In a recent article Dr. Harris sums up his view in the following words: "The report finds a deep underlying unity, and affirms the necessity of approaching this unity at all points of the course of study, but without the hope of reaching the fundamental unity until the period of higher education." He seems to think the evils of artificial correlation are so likely and numerous that he lays nearly all the emphasis on the dangers, and buries his recommendations deep down almost out of sight. Taken altogether, however, these recommendations, scattered as they are and vague too in many instances, are as certainly and plainly a demand for interrelation of the subjects of the curriculum as are even Mr. Gilbert's or Mr. Jones's dissenting reports. These passages, when collected together so that one will help explain another (*i. e.*, when "correlated"), make a very much stronger impression than when isolated. The following references are to the pages of this REVIEW, for March, 1895:

"Language rightfully forms the center of instruction in the elementary school" (p. 236). On p. 235 the report emphasizes the meaning of words, and insists on "setting the teaching process on the road of analysis of *content* rather than *form*."

"It is easy for any special discipline, when continued too long, to paralyze or arrest growth at that stage" (p. 239). "Those formal studies should not be discontinued, but *subordinated* to the higher study of literature" (p. 241). That is certainly the kernel of the theory of correlation as its best and wisest friends understand it.

Does anyone seriously doubt that Dr. Harris believes there is some natural and profitable correlation between reading, writing, composition, spelling, grammar, and literature? His treatment of all these under the one head of language shows his intention to interrelate them in the classroom.

Further on, correlation of the other subjects is demanded. "Inasmuch as reading is the first of the scholastic arts, it is interesting to note that the whole elementary course may be described as an extension of the process of learning the art of reading. First comes the mastering of the colloquial vocabulary in printed and script forms. Next come five incursions into the special vocabularies required (*a*) in literature to express the fine shades of emotion and the more subtle distinctions of thought, (*b*) the technique of arithmetic, (*c*) of geography, (*d*) of grammar, (*e*) of history" (p. 257). "It is thought by your Committee that the old style of composition writing was too *formal. It was kept too far away from the other work of the pupil.* Instead of giving a written account of what he *had learned in arithmetic, geography, grammar, history, and natural science*, the pupil attempted artificial descriptions and reflections on such subjects as 'Spring,' 'Happiness,' 'Perseverance,' 'Friendship,' or *something else outside of the line of his school studies*" (p. 280). "Your Committee believes that every recitation is, in one aspect of it, an attempt to express the thought and information of the lesson in the pupil's own words, and thus an initial exercise in composition. The regular weekly review of the important topics in the several branches studied, is a more elaborate exercise in composition." "Your Committee believes that there is some danger of wasting the time of the pupil in these oral and written language lessons in the first four years, by confining the work of the pupil to the expression of ordinary commonplace ideas not *related to the subjects of his other lessons*, especially when the expression is confined to the colloquial vocabulary. It is clear that the pupil should have a dignified and worthy subject of composition, and what is so good for his purpose as the *themes he has tried to master in his regular lessons?* The reading lessons will give matter for literary style, the geography for scientific style, and the arithmetic for a business style; for all styles should be learned" (p. 281).

So, too, the need and advantage of correlation in geography and its relations to the other subjects of the curriculum are likewise set forth. Speaking of the improvement in the methods of instruction in geography, he says what formerly prevailed may be termed "sailor geography." "Little or nothing was taught *to give unity to the isolated details* furnished in endless number." "The industrial and commmercial idea is, therefore, the *first central idea* in the study of geography in the elementary school." "From this beginning, and holding to it as a permanent interest, the inquiry into the causes and conditions proceeds concentrically to the sources of the raw materials, the methods of their production, and the climatic, geologic, and other reasons that explain their location or their growth" (p. 250).

At considerable length the report points out how geography is to be correlated with the other subjects of the course. "It has been found that the lessons in botany, zoölogy, and physics give the pupil much aid in learning his geography and other lessons relating to nature, while history lessons assist very much his comprehension of literature and add interest to geography" (p. 261). One sentence sounds almost as if Colonel Parker had written it, so explicitly does it recognize the correlating value of geography. "Physical geography performs the work also of *correlating the sciences* that relate to organic nature by showing their respective uses to man" (p. 266).

When the report comes to speak of the dangers of the departmental plan for the elementary school, it lays the emphasis just where every advocate of correlation would lay it. "In the elementary school, for at least six years, it is better, on the whole, to have each teacher instruct his pupils in all the branches that they study, for the reason that only in this way can he hold an even pressure on the requirements of work, correlating it in such a manner that no one study absorbs undue attention" (p. 285–6).

The philosophical unity of all knowledge receives attention likewise in the report. "For higher education seems to have as its province the correlation of the several branches of human learning in the unity of the spiritual view furnished by religion to our civilization. By it one learns to see each branch, each science or art or discipline, in the light of all the others" (p. 268).

I have taken thus much space to speak of the Report of the Committee of Fifteen on correlation of studies for three reasons: (1) because the impression has spread that the Report is against the idea of correlation of studies; (2) because it has been asserted that the Report ignores this sort of correlation and does not treat of it; (3) because a careful study of the references to correlation in the Report is well adapted to give us a clear idea to start with, in discussing the other proposals of plans for correlation.

To the latter we shall now turn. They are of two main kinds: (1) those of the first kind are plans that are based on the natural, causal, or other relations between the facts taught in the different subjects. The correlation of geography with history is of this kind. The relation between moisture, climate, soil, etc., and plant growth; the interdependence of plant life and animal life in the village pond, or between plant fertilization and insect life, are all examples of plain natural correlations. These appeal to everyone more or less. No one is so idiotic as to propose to teach each fact out of connection with every other fact. Nearly all of us would agree that this kind of correlation should receive the fullest possible scope; that those who make the course of study and the teachers likewise in their daily work should make it a cardinal principle, and should be at great pains to search out natural and useful relations between the facts and subjects taught; in order that the whole curriculum may be an organic body of knowledge and not a chaos of odds and ends to be forgotten and never used because in no relation to other facts and hence never recalled. Of course, even the poorest scholar and the poorest teacher cannot help bringing some things into relation, so that there is, and always has been, some correlation of studies in every school. But the whole work is vastly improved and made more serviceable if thoughtful pains is taken to bring out other connections wherever possible, provided only that these associations are natural and therefore capable of later profitable utilization.

Is not the difference between the able and thoughtful man on the one hand and the shallow commonplace individual on the other hand, chiefly this—that the former has thought of the relations of facts to each other, and therefore sees everything in its true perspective, while the latter failing in this is swayed by the thought of the moment, and is unable to judge and weigh facts? Indeed, when we analyze our knowledge we find that it is all more or less relative, and the greater the number and importance of these relations with other facts, the more useful and the more available, too, in memory our knowledge becomes.

The chief part of such a plan of correlation, aside from bringing out these interrelations, as just pointed out, consists in the distinction between the *form-studies* and the *content-studies.*

By content-studies are meant "those upon which it is fitting that the mind of the child should dwell," and they include history, literature, and the sciences. This is the kind of studies that Spencer so emphasizes in his famous chapter on "What knowledge is of most worth?" By form-studies are meant "those that comprise the means or modes of expression by which thoughts are communicated," and include reading, writing, drawing, making, and modeling. They aim not at knowledge or understanding of man or nature, as do the content-studies, but at facility in the performance of certain, for the most part merely mechanical, activities.

When a pupil is reading, writing, or speaking, he should have his mind on the thought to be expressed. By forcing him to keep thinking of how he will say it, you make him self-conscious and produce the usual pitiful failures seen in the silly, awkward, self-conscious recitation or artificial commencement exercises.

This distinction is not that content is more valuable than form, as Mr. H. W. Brown's recent discussion in this REVIEW[1] assumed; for one is as necessary as the other. But the mind of the pupil should "dwell" on the *thought* he is expressing, not on how he expresses it. We all know *Punch's* squib:

> "The centipede was happy quite
> Until the toad in fun
> Said, 'Pray, which leg comes after which?'
> Which worked her mind to such a pitch,
> She lay distracted in the ditch,
> *Considering* how to run."

The child's mind is quite as easily distracted by being required at too early an age to direct itself inward to observe its own processes.

The cardinal principle then, with the advocates of such correlation, is that these various arts of expression, comprising the old-time curriculum of the three R's, shall be taught by constant reference to a noble and useful content. Therefore, says Dr. Harris, these formal studies of reading, writing, grammar, and composition should be subordinated to the study of literature. This does not require that these arts shall be taught *incidentally*, and that a child reciting in history or science work should be interrupted when he makes a mistake in expression, and the attention and time of the class be taken from the subject in hand by a five-minute digression on grammatical accuracy. It does mean that when he reads or writes he shall have something worth reading or writing, so that he can put his attention where it belongs, namely, on the thought expressed. When he writes a composition let him give a written account of what he has learned in arithmetic, geography, grammar, history, or natural science. So says Dr. Harris, and so say we all.

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[1] IX : 496.

That is, then, the first kind of plan for correlation of studies. The second kind of correlation accepts all of the suggestions offered by the first kind and goes one step further. It insists on a subordination of all the studies to one or more main ideas, which thus become centers or cores about which to group the other subjects. For this kind of correlation we may with more propriety use the term concentration. De Garmo has appropriated to his own plan the term co-ordination, and to this use of words I shall conform. We have then the following table of the different plans for

THE CORRELATION OF STUDIES

Without "Centers"	With "Centers"		
I *Interrelation*	II *Co-ordination*	III *Concentration*	
The Report of 15.	Two Groups: Dr. Frick.	Subordination	Ziller.
Jackman.	Three Cores: De Garmo.	to	Rein.
Miss Arnold.	Four Groups: Prince.	Culture	C. A. McMurrry.
Howe.	Five Groups: Harris.	Studies.	F. M. McMurry.
(Dr. Frick?) Parker.		(Geography: Parker?) (School: Hyde?)	
Accepted by all and the basis of all plans proposed by anyone.	Individual plans depending more or less on personal views as to the chief value of some special subject.		

To these might be added "surgical concentration," which proposes to "concentrate" by amputation of all the subjects except two or three at a time. This plan has a periodic advocacy. Its present champion is Mr. Samuel Thurber of Boston.

It is to be noticed in the above table that all advocates of co-ordination and concentration accept and emphasize interrelation; all advocates of concentration accept and emphasize both interrelation and co-ordination. With all plans there is a tendency toward concentration, although advocates of mere interrelation or co-ordination stop short of completeness. These facts will explain, I think, the great confusion in the use of terms at present. There can be no question that "correlation" is the larger generic term and includes all the other more specific plans under it.

It seems to me impossible to discuss the subject of correlation without taking into account the difference in children at different ages. The primary school may perhaps need a plan for concentration something like the one advocated by Rein and the McMurrys; but the upper grammar grades will do better with a co-ordinated curriculum such as Prince and De Garmo defend; while high school and college students can dispense with the more or less artificial aids involved in these plans, and depend merely on the natural and causal interrelation of the facts in all subjects of study. The more advanced pupils then begin to appreciate "the higher philosophical unity" of which Dr. Harris speaks in the Report, and "which does not lie on the surface, and therefore cannot be developed in the elementary school." It is, therefore, a great mistake to suppose that the different plans for correlation are opposed to one another. They are, as was pointed out above, rather to be considered as different *stages* of one plan, and are applicable to children at different periods of development. The young child *feels* the oneness of nature and of life. "The nursery is the place where study is most general and universal" (President Hyde). To the six year old pupil the division of study into subjects has only just begun. Zoölogy, botany, meteorology, geology, agriculture, horticulture, astronomy, etc., all commence in the undifferentiated form of nature-study. The same is true of language work, history, etc. The proper correlation for primary schools is found, therefore, in the lack of that isolation and analysis which the Report of Fifteen says should precede synthesis and correlation. This also conforms to the facts of racial development. The child but repeats the history of the race when his mental life thus begins in general culture and unspecialized knowledge. The differentiation of studies should, of course, increase with the age of the pupil, even as it has done in the history of mankind. I must therefore repeat, plans for correlation that take no account of the stages of child development are artificial and impracticable.

While it seems most correct to class together the correlation advocated by the Report of the Committee of Fifteen, and that worked out by Mr. Jackman of the Cook County Normal School, that by Miss Arnold while at Minneapolis, that by Mr. Howe of Champaign, Ill., and that by the late Dr. Frick, Director of the Frankeschen Stiftungen in Halle, Germany, as not based on any "centers," and therefore as different from the idea of concentration, yet I think the tendency with every one is to emphasize some one subject or principle, and to give it the right of way with a greater or less domination over the other studies. Such subordination of the subjects to the culture studies is what some people mean when they talk of harmonious development.

Dr. Harris, in the Report, makes *language* the center, and all the other studies are so many incursions into the surrounding country from this one citadel and base of operations. Jackman and Howe are teachers of science, and with them *science-work* takes the lead, dictating more or less the work in reading and the other subjects. With Dr. Frick the backbone of the curriculum, after the primary grades are passed, is *history*. The pupils trace with elaborate care the growth and development of the German people. This being the case, it is natural that the environment of the pupil—local, State, and national—should receive the chief emphasis.

Miss Arnold's course of study for the Minneapolis primary school follows essentially the same plan. "Nature-study, literature, and history form the central lessons for each day. With these all the rest of the work is as far as possible related. Thus the child studies corn, for example, in his science lesson. He learns more about it in his reading lesson, writes the description of the plant for his language work, draws leaves and tassel in the drawing lesson, and learns to spell the terms necessary for his description. He sings the 'Harvest Hymn,' commits to memory Whittier's 'Corn Song,' or reads Longfellow's beautiful version of the Indian myth. The farmer's life, with its strong and manly labor, and our dependence on it, is made the subject of frequent talks. In this way nature and human life furnish the themes and the lessons in *form* follow of necessity to express the thoughts gained."

All of these plans tend more or less to centralization. Indeed, I cannot see that any plan of correlation can be regarded as a satisfactory solution of the problem for the elementary school, if it does not center the studies into a few groups, though perhaps not about one single study.

This question of grouping which the Committee of Fifteen had so squarely before them and utterly failed to answer, is the one that is most important and most difficult, and one that should never be left to the individual prejudices of the teachers. The Committee's questions very nearly amounted to asking: (1) Is complete interrelation possible? (2) Is co-ordination preferable? (3) Is some form of concentration practicable? They have done a good service in simply *asking* these questions, even though they have not answered them.

Outside of the Committee, however, various proposals have been made. Some have advocated several centers, but others, with greater consistency perhaps, though with greater narrowness, have recognized only one center, and that the study that serves the one chief aim of character-building. These two kinds of correlation with centers are, then, first *co-ordination* advocated by De Garmo, Prince, Hinsdale, and others; secondly, *concentration*, which perhaps may be considered to be the German Herbartian proposal. It is prominently advocated by Ziller, Rein, Dörpfeld, the McMurrys, and, in a modified form, by Colonel Parker. I shall take these up in order.

President De Garmo, who is no doubt the best versed in the Herbartian ideas of anyone in this country, and withal one of the most independent and original in modifying them to adapt them to our conditions, has proposed "to have three co-ordinate, but more or less distinct, cores or centers of unification, having constant cross-relations wherever the nature of the subject matter and the convenience of the classroom make them advisable." Literature and geography assume in this plan the nature of universal correlating studies, since the concrete matter of all three cores has both literary and geographical aspects. The three cores are as follows:

(1) "The humanistic group of studies, having a distinct ethical content in literature and history, and a historical development as seen in the culture epochs through which civilization has passed. Language study becomes, therefore, merely the formal part of literary and historical study. Were instruction in this branch of elementary education nothing more than lessons in composition, spelling, and penmanship, it might be made purely incidental to the other work. This is, however, not the case. While, therefore, English grammar maintains its place as a separate study, the subject matter of the concrete language exercise is to be taken from the material of literature, history, and nature-study." This, of course, agrees essentially with the recommendations of the Report of the Committee of Fifteen.

(2) "The nature group of studies have no specific ethical content, and no long progression from primitive to higher and higher truths, since for the most part these studies have all been developed during the present century. Mathematics is the formal aspect of nature-study in its quantitative relations, just as language is the formal side of the humanistic studies."

The denial of ethical content to nature studies is strongly contested by Jackman, and, I think, with abundant reason. The idea of evolution is the greatest power in the present age toward reorganizing our whole system of ethics, and revivifying our religion, history, and art. The denial of culture epochs in science is also refuted by Beyer, as pointed out by Van Liew in the Herbart Society Year Book for 1895, vol. i.

(3) "The economic core represents the two factors, man and nature, in interaction, and is at once a principle of application for all studies and a specific department, as seen in such subjects as manual training, industrial art, mechanical drawing, commercial geography, and the like." De Garmo concludes his plan with a few practical considerations regarding the correlation of these three groups with one another. These are essentially the same as those Dr. Harris recommends in his report:

viz., that the reading in the form of literature pertains alike to culture, nature, and economics, and therefore may be made the means for bringing about close associations among the realms of knowledge; secondly, that geography, in its various aspects as political, physical, and commercial, comes into touch with all the other subjects, and in a certain sense is an all-embracing and unifying study.

Now, these considerations seem to me utterly misleading; for literature and geography are each of them loose groups of studies without any innate unity at all. The mere fact that books on art, natural science, economics, etc., are classed together as literature does not bring these subjects into any real relation. It seems absurd to speak of one subject as being able to correlate other subjects.

Dr. John T. Prince has proposed a quite different plan of coördination for grammar and high schools. The chief features of his plan, indorsed in the main also by Superintendent Tarbell, are as follows: (1) The subjects of instruction should be separated into groups of related subjects. (2) Each group of subjects should be given in charge of one person, to be taught by him with such assistance as circumstances will permit. (3) Each head of department, or special teacher, should have charge of the same pupils for at least four years. (4) If there are two or more teachers for any group of subjects, there should be constant consultation of teachers, with reference to the close correlation of all the subjects of the group. (5) There should be frequent conferences of the teachers of all groups, to consider what correlation of all subjects may be made. The proposed grouping of subjects is as follows:

I. *Knowledge relating to man*

1. Biography and history. 2. Political geography. 3. Civil government.

II. *Knowledge relating to the earth*

1. Geology. 2. Zoölogy. 3. Botany. 4. Physics. 5. Chemistry. 6. Physical geography.

III. *Knowledge of space and quantity relations*

1. Arithmetic. 2. Geometry. 3. Algebra. 4. Applied mathematics (mechanics, astronomy, etc.).

IV. *Expression*

1. English and foreign languages: (1) Reading, (2) grammar and logic, (3) composition. 2. Drawing. 3. Manual training. 4. Music.

Except in subjects of the fourth group, only one subject of a group is intended to be studied at a time as a central subject correlating the others of its group with it. Reading, composition, and drawing should be constantly correlated with the subjects of the first three groups. Dr. Frick's two groups are those so universally recognized—man and nature. This is also the grouping almost everywhere accepted by the Herbartians.

Dr. Harris has elsewhere advocated a fivefold co-ordination of studies : (*a*) Nature, comprising (1) science, or in the elementary grades, geography; and (2) mathematics; and (*b*) Man in his threefold aspect of intellect, feeling, and will, comprising (3) grammar, (4) literature, and (5) history.

With Ziller and Rein, "*the growing personality of the pupil is the center, to which all the multiplicity of interests and new ideas must be related*," and therefore their idea of concentration is that "of unification of the manifold subjects in instruction in the growing personality of the child." This is also Parker's idea, and it is, I think, undoubtedly correct. The growing mind of the child is the center in a sense in which no one subject, such as history, literature, or science, ever can be.

Perhaps the most distinctive characteristic of the plan of Ziller and Rein, as compared with all the other proposals thus far mentioned, is, that they make their principle of concentration the basis not only for the correlation of studies, but for the choice of studies as well. For each school year they demand the presentation of a rich culture material of organized knowledge adapted to the child's stage of development and apperception. Secondly, they demand that for each year all the other studies shall be properly interrelated with this leading culture material; so that the work of each year forms an organized whole in the interest of character-forming. These other studies help to supplement and complete the realization and appreciation of each stage of moral development of the race. For Ziller and Rein life is a question of moral worth primarily, and all the rest, wealth, honor, knowledge, ability, power over nature, progress and skill, material resources, and all the arts and sciences are but *accessories* to make a background, to furnish the stage and scenery, where the moral revelation of the world is presented to the pupil.

Ziller applies this principle to the choice of subjects for the curriculum as follows: There should be taught: (*a*) Whatever is directly necessary for the full understanding and the exact characterization of the culture content; (*b*) Whatever will help show the connection of the facts of progress in culture and ethical development; (*c*) Whatever studies serve as a preparation or interpretation of the culture material for the individual understanding of it; (*d*) Whatever studies serve to nourish and extend the interest roused in the culture material.

Ziller and Rein would, however, distinguish between studies that *directly* and those that are only *indirectly* associated with the culture material. They would not insist that everything taught must have a direct connection with the development of a moral character. Their view is rather this: that the development of a moral character being the chief aim of education, everything that helps to develop a sound and healthy mind in the pupil is in so far directly or indirectly connected with the development of his moral character. Of course, with such an interpretation of the principle, they practically admit all subjects to the curriculum that we do, but the point of view is interesting and suggestive, and involves a difference in the treatment of the several subjects in the programme. For, the German Herbartians deny the right of these other studies to be considered as independent and isolated subjects, as is done by the special and departmental teachers, and as is demanded by the necessities of scientific investigation and the like in university work, for instance. Accordingly, the concentration is aided, (1) by the fact that all the subjects are chosen with reference to the culture material, and hence are thus associated together; (2) by the culture quality and historical direction of all the instruction in all the subjects.

It was, of course, to be expected that such a theory would maltreat the sciences, mathematics, and physical education. Misunderstanding the principles involved, many Herbartian teachers in Germany have been led to subject all of these studies to the literary method, science work has degenerated, and mathematics has taken on an artificial and far-fetched resemblance to a reading book. All of this is vicious and unnecessary. The subordination of the other subjects need not and should not extend to the method of teaching them. But this subordination is much nearer being right than is the all too common logical and scientific method of nearly all the text-books. The demands of apperception and interest would be more likely to be fulfilled by a teacher inspired with a faith in the Ziller-Rein theory of concentration, than they would by the average teacher of specialties.

To make this matter of subordination of subjects clearer, let me take an example from Rein. Geometry begins in his curriculum in the fourth school year and continues throughout the rest of the course in the Volksschule. I choose this subject because it is one of the most difficult to bring into subjection to the principle of concentration, and is one of those subjects that we usually insist shall have its own principle of development, and not be a servant and slave to some other.

Rein states the object of the course in geometry to be to develop in the pupil, through insight into construction and calculation, the ability to exercise the full mastery over form and figure for the purposes of life. Hence educative instruction cannot treat scientific mathematics ; its work must be limited to the needs of solution of practical problems. What interest can the child possibly have in knowing, for instance, that the sum of the angles of a triangle is 180°? He would quite as lief that they made 200°. It is the practical problem taken from the incident of the child's life that attracts his attention and makes him *want to know*. This "wanting to know" is for Professor Rein an absolutely indispensable condition of all educative instruction. Of course, the lessons in natural science and the object lessons in the different studies furnish these practical problems. This is essentially Mr. Jackman's plan at Chicago. But the subordination does not control the order of topics, as one sees from the following: Rein begins with the observation work on the cube or other simple form, to develop the fundamental ideas of body, surface, line, and point. Then the synthetic order is pursued from point to line, angle, triangle, quadrilateral, polygon, circle, and solid body, following the working out of every geometrical theorem with an abundance of problems in construction and mensuration taken from actual life. Ziller and Rein make the practical problem, therefore, the starting point as well as the end of all geometrical instruction.

In the fourth and fifth school years the simpler forms, cube, square, and oblong prisms (or parallelopipeds), and the polygonal pyramid, cylinder, cone, and sphere are drawn, modeled, measured, and the concrete ideas which are to be the basis of all the later work are obtained. In the sixth and seventh years the work is more properly geometry, consisting of the most important theorems, constructions, and applications in plane geometry in the sixth year, and in solid geometry in the seventh year. The eighth grade have the more difficult theorems in regard to equality and similarity of figures and the Pythagorean theorem. Mensuration plays a large part in all the work. Maps are made, to scale, of the school yard, gymnasium, playground, and schoolroom. The area of these surfaces is calculated. Distances are determined that cannot be directly measured, etc.

The McMurrys have not in any essential feature departed from the principles of Ziller and Rein, but they feel that the problems are as yet still largely unsolved. Charles McMurry thinks that "by omitting some of the topics suggested in the culture subjects, and enlarging upon others, developing the notions of classes and principles so far as is desirable, the natural science lessons may be made sufficiently scientific without losing the close relation to the central subject matter for the year. There is no doubt that the science lessons will add greatly to many topics suggested by the stories, and will bring the whole realm of nature into close relation to history and geography." Dr. Frank M. McMurry has given an excellent presentation of the subject in the Herbart Society Year Book. He, however, still insists on a concentration about one subject of study, making literature the center for the lower grades and history the center for the upper grades. He declares that the idea of making the child the center is based on a confusion of ideas. Apperception deals primarily with the relationship of the studies to the child; but concentration has to do with the relation of the studies to one another. He would subordinate some branches to others in order to secure the closest connections; "but any attempt to make all the studies directly dependent on the center alone would at times prove very artificial." The arguments here so forcibly and clearly presented by Dr. McMurry are just as applicable to all other schemes of correlation, and I fail to see any sound reason advanced for the subordination of one subject to another. Abundant and cogent arguments are given in the paper for making the ethical element in every study the center of school work, but none, I think, for concentrating on the ethical element in any one subject alone.

Colonel Parker's theory of concentration, as given in his recent volume of *Talks on pedagogics*, is so delightfully vague, and all-embracing, that you cannot object to it as being narrow, but you can object that he has not made himself plain. Some things that he says are undoubtedly good, and the general trend of the book is sound and inspiring, but as you read it you wish to goodness there was more application of concentration to the matter in the book itself, so that, when you finally finished the 451st page, you might know what in the world it all meant. I do not believe I understand Colonel Parker, and therefore cannot do him justice. He does certainly lay great stress on the child mind as being the basis and reason for the concentration. The child even in its early years makes a beginning in all subjects of thought. His plan is rather "expansion" from a center, than concentration about a center. It is, I am afraid, in other ways, too philosophic for even teachers to understand, let alone the youngsters for whom it is intended. He takes strong ground against the idea of formal discipline, and insists, as do we all, that actual, concrete knowledge of the same sort as has constituted the child's experience before the school age, shall continue to be the material through which all form is to be taught.

In conclusion, I may sum up the demands of correlation in somewhat the form expressed by Rector Dörpfeld, one of the clearest and most level-headed of the German Herbartians. There should be:

1. Normality of the curriculum, *i. e.*, the full number of branches; or, as Dr. Harris puts it, all departments of human learning must be represented. This demand is as much opposed to a narrow view of concentration (with *Robinson Crusoe* for a center, for instance), as it is to the surgical plan of Mr. Thurber.

2. Unified departments of study; *e. g.*, the work in language, as Dr. Harris points out, embracing as it does, reading, writing, grammar, spelling, literature, and composition, must itself be unified by correlation.

3. Interrelation of all the branches in teaching, according to their several characters: (*a*) Of the thought and language studies, (*b*) Of the thought and form studies, (*c*) Of the branches of the thought studies among one another.

4. Central position of the culture material in all the studies in the service of character building.

5. Adaptability of the correlation to the progressive stages of child-development.

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VI

DISCUSSIONS

SPIRITUAL INCONGRUENCE

In the discussion of Dr. Hinsdale's great paper at Denver, on "The laws of mental congruence and energy,"[1] Dr. Soldan precipitated the question whether the frequent change of teachers is not a disadvantage to the child as he advances through the grades of the school. The time of the Council did not permit a full discussion of this phase of "congruence," but the trend of the remarks made by some eminent authorities was to stamp the custom of changing teachers with the change of grade as an illustration of "spiritual incongruence," and to favor the restriction of the child to one teacher during at least a part, if not the entire period, of his elementary education.

In the great majority of the graded schools of this country, classes are promoted annually or semi-annually; in a few instances they are advanced every three months, and possibly oftener. The promotion of classes may or may not involve a change of teachers. Usually, however, the teacher remains permanent, while the class in its progress encounters a new teacher at each stage. It is urged that this change of teachers with the change of grade is morally and spiritually a disadvantage to the child, inasmuch as it breaks the continuity of that spiritual influence which makes for character; that in sundering old attachments to form new ones, there is a tendency to render the child heart unnaturally callous, and that the emotional disturbance caused by interference with the current of established affections tends to produce moral insensibility and spiritual demoralization.

The time element in this, as in many other school problems, is of the utmost importance. There is a vast difference between a change of teachers every three months and a change every year. In the former case the objections urged may be admitted as valid, while in the latter their validity may be questioned. The teacher should certainly have charge of a class long enough to know her pupils, to study their individual characteristics, and provide for their individual needs both in discipline and instruction; she should remain in charge long enough for the children to study her character, and to appreciate that which is high and ennobling in her life and personality. It requires time for the pupil to absorb that spiritual influence which silently radiates from the teacher and creates the moral atmosphere of the school. But it must not be forgotten that there is a limit in time to the teacher's power to provide for the child as well as to the child's capacity to absorb from the teacher. When this limit is reached, a change is demanded in the interest of both teacher and class. It is important that we ascertain what are some of the effects produced upon the child by the system of promoting the teacher with the class from year to year. Naturally, it will be claimed that much depends upon the teacher. But in this discussion we must take it for granted that the teachers are of the right kind, possessed of a noble character, rich in culture and in the graces of an attractive personality. Would the frequent change of teachers, under such circumstances, conduce to the best interests of the child? "What would be the effect upon the child if he were given a new mother every three months," is a question asked in this connection. Again it may be said that much depends upon the mothers; if all are equally kind and good and noble, would the change, after all, prove a very serious detriment to the child's spiritual growth? But it must be remembered that the relation of the mother to the child is, and always must be, very different from that of the teacher. Motherhood is a natural and permanent relation, and, when once severed, it can never be replaced, except in name. The old analogy by which the teacher is placed *in loco parentis* is used simply to express a legal and temporary relation, and in so far as parental functions are assumed by the teacher, they are necessarily weak and artificial.

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[1] EDUCATIONAL REVIEW, X: 152.

Character is complex. The process of its complete development requires concentration and divergence, permanency and constant change. Nature has wisely ordained a fixed center in the home—the mother. The child's school life is but the circumference of an ever widening circle, whose center continues to be the home. In this center the child finds a fixed ideal; in the circumference he meets with continuous change. Later on, the center is modified into the family, and the circumference expands into the ever-changing phases of social and civic life. As the true measure of the real life of the child, as well as of the man, is the circle that it occupies, all the forces of that life, centrifugal as well as centripetal, must be developed in perfect harmony. The sundering of ties and warm attachments in the circumference becomes a source of moral and spiritual strength rather than of weakness to the child. Indeed, when the relation of teacher and child becomes one of personal affection, it is invariably detrimental to the child. This idea fully accords with the law of the primary psychic elements, as stated by Dr. Hinsdale: "Until the mental current reaches a given height, cognition, feeling, and will swell together. That point reached, any one of the three must swell at the cost of one or both the others." When love, in the sense of personal affection, dominates the child's school life, there results a corresponding weakening of the cognitive and executive faculties. Love for the teacher may serve as an incentive, but never as an adequate motive for right doing.

To confine the child to the influence of one teacher during his course in the elementary school, or even during a considerable part of that course, is to circumscribe his moral and spiritual life. It arbitrarily limits his opportunities and narrows his character; it grooves his personality and restricts his spiritual nutriment to that which he is capable of absorbing from a single source. The "one-study college" mentioned by Dr. Hinsdale is not more fatal to the mental development of the student than is the "one-teacher school" to the child's moral and spiritual growth. If the school is to contribute a large spirituality to the child's future, it must enable him to live more richly and more abundantly in the life that now is.

Further, it is conceded that the best product of the school is the result not of imitation, but of assimilation. With but one teacher as an ideal for a series of years, the child is in danger of becoming little more than a mechanical duplicate of that teacher. Individuality is sacrificed, and originality in habits of thought and ideals of conduct is impossible. In many instances, no doubt, where the teacher is endowed with the elements of a rich and commanding personality, such idolatrous imitation may not prove wholly disadvantageous. But the fact remains, true in the moral and spiritual as well as in the mental and physical life of the child, that his real progress is in proportion to the activity of his individual energies. It is only by the practice of self-direction and self-adjustment to new conditions that the child can attain to that strength and flexibility of character which make the life purposeful and exalted.

Experience and observation teach us that there is a time limit to the pupil's power to absorb and assimilate spiritual influences from any teacher; beyond this point spiritual fatigue ensues. Dr. Hinsdale's application of the law of "mental fatigue" to the intellectual activities is equally true in the child's spiritual life: "Persistent application on a stream of falling energy involves waste of time and power;" and whether the proper remedy be a "change of method" or "change of teacher," the sooner it is applied the better. Spiritual fatigue also may be "specific or generic," and "diminished power" for one activity is not diminished power for all activity. Failure of spiritual growth under one teacher, and under a given set of conditions, does not imply failure to grow under any conditions. It is by no means unusual to find a child, sullen and morose under one teacher, bright and happy under another; under the one the spiritual energies are paralyzed; under the other they are vitalized and quickened into healthful activity and power. Teachers who have taught a class of children continuously for several years often ask the superintendent for a change because they feel, and candidly confess, that they have been "absorbed." There are some exceptional natures in almost every class that suffer to some extent under the best teachers; and the average child, if continued for a series of years under even an exceptionally strong teacher, will manifest unmistakable signs of spiritual fatigue and languor. If a new teacher is to take charge of the class, the average pupil is eager to start to school; his anxiety, curiosity, and enthusiasm are unbounded. This spiritual hunger for a larger life cannot be appeased until with flushed cheek and beaming eye he sits facing the new teacher. With the same teacher from year to year, there is wanting an important element in spiritual acquisition—this intense expectancy—this attitude of complete receptiveness. Too many children become weary of school life without apparent cause, and withdraw before their elementary course is completed; especially is this true of the boys in the higher grades of our city schools. Many reasons are assigned to account for this, but may we not find the underlying cause in the fact that the child's aspirations for a larger and richer life are not met and satisfied by the school? The growing, aspiring boy is sent to school to a young girl whose circle of life and experience is much more limited than his own; he exchanges the school for the larger life of the shop or the office, and ingenuously informs the teacher that he has "quit school to go to work."

Another weighty consideration in the development of character is the proper adjustment of the child to his spiritual and natural environment in the civilization into which he is born. This form of correlation has been very adequately treated in the Report of the Committee of Fifteen, so far as it involves the educational values of the several subjects of instruction, but the correlation of the teacher with the child and his future seems to be even more important than the correlation of studies. The school is to produce an "adjustable boy," not simply in physical and intellectual endowments, but also in those deeper spiritual lines which will adapt him for the highest degree of usefulness as a member of society and a citizen of the commonwealth. This general doctrine is concisely expressed in the often quoted and more often ignored formula —*non scholæ sed vitæ*. If the child were born into a monarchical government, characterized by unchangeableness in the *personnel* of the ruling class, a similar condition might appropriately characterize his school preparation, in order to adapt him to the spirit of his civilization. In a republic, however, he must be able to adjust himself to frequent changes in civil rulers as well as changes in the conditions and demands of community life. As the child advances from grade to grade in the school, the class with its varied constituents remains permanent, a fitting prototype of the larger community life whose varied interests he must soon share; while the teacher foreshadows, to some extent, the character and dignity of ideal official life in a republican government. A change of teachers at intervals necessitates in the child that spiritual readjustment which in the end results in the adaptation of the man to the tenor and spirit of the civilization of which he is a part. All the means and processes of the school should thus have in view the correlation of the child with his future environment in social and civic life.

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VII

REVIEWS

Friedrich Froebel's Pedagogics of the kindergarten—Translated by JOSEPHINE JARVIS. (*International Education Series.*) New York: D. Appleton & Co., 1895. 337 p. $1.50.

This volume of translations of Froebel will doubtless find a hearty welcome from all kindergartners who have not been able to refer to the writings of Froebel in the original, and who, in consequence, have had to depend upon manuscript copies laboriously made and carefully handed down from one to another, much as were the valuable manuscripts of the Middle Ages; and, I may add, that much of the same holding on to the letter, rather than the spirit, has sometimes resulted.

It is plainly evident to the deeper student of the kindergarten that Froebel shared in the philosophic movement of his time, though in his own peculiar and most interesting fashion. With Kant and Fichte, Schelling and Hegel, he emphatically distinguishes between the inner and the outer, the self and the other, the subjective and objective *ego*. This is most distinctly brought out in his *Mutter und Kose Lieder*, of which Miss Susan Blow has recently given us such a fine, free translation. Of this book he himself says, "I have here laid down the most important part of my educational method." Still, his philosophy, as well as his psychological methods, is stated in the *Pedagogics* in his elaborate explanation of ways in which the Gifts may be used, and his interpretation of the value of the same to the child.

The book contains very wisely selected portions of the fragmentary writings of Froebel, which were left in a somewhat scattered condition at the time of his death, and which were afterward collected by Dr. Michaud Lange. It begins with a kind of prelude, as it were, entitled "A New Year's Meditation," which has been appropriately placed at the front of the book, giving the reader a glimpse of the man Froebel before beginning the study of his work. Then follows his plan for an institution for fostering the child's creative activity. To the educator of to-day this is an interesting revelation of the germ out of which the kindergarten afterward evolved. It also shows his insight into the fact that the nursery is the laboratory in which future psychologists will make most of their researches. On p. 29 may be found a clear statement of the psychological views which run throughout all Froebel's writings. In fact, the second and third chapters are saturated with "Froebelian philosophy," in true Froebelian nomenclature.

The following ten chapters are on the first five of the kindergarten Gifts. In the first chapter on the Ball, after giving the mother directions for some exceedingly simple games, such as putting the ball into the hand of the infant and then suddenly pulling it out of his hand by means of a string attached to the ball, he adds (p. 37): "From these perceptions there at once develop in the child's mind the three great perceptions of object, space, and time which were at first one collective perception." I quote this sentence almost at random, but as a characteristic one, as illustrative of Froebel's way of showing the universal in the particular. He sees in all unfolding of the senses, and all impression received from the external world, a distinct unfolding of the inner nature, an indelible impression upon the spirit of the child.

The narrowness which has led some kindergartners to the use of the type-form to the exclusion of all others, and which of late has been justly criticised, cannot be traced to Froebel. Although he heartily believes that the geometric forms underlie all forms of creation, and, as the A B C of the great language of form, ought to be the familiar playthings of the child, he nowhere shuts out the use of other and more familiar objects. He says here (p. 50), as well as elsewhere when speaking of the other Gifts, "In order to increase the power and advance the development of the child, the plays carried through with the ball are, as the opportunity or the demand is made, given with other objects, for example, an apple, a handkerchief, a ball of thread, a key, a nut, a flower, etc."

In his chapter on the Second Gift we are introduced into what is often called Froebel's "absurd mysticism," but what is in reality only an acknowledged point in all psychology, *i. e.*, that the imagination is awakened and directed by the sense-impressions. In other words, that the inner nature of the child is fed by the kind of material objects with which his activity employs itself.

We have brought out in the chapter on the Third Gift the same thought, the directing of the spiritual growth of the child by the right kind of objects. Froebel here distinctly states that the use of this divided cube is not simply to teach divisibility of form or number; nor does its chief significance lie in the fact that its simplicity invites the constructive rather than the destructive play of the child's powers; but rather that the continued use of it gives to the young mind a presentiment or foreshadowing of "the spirit of unity of all life."

After showing how each of the eight small cubes should be used, in each form created by the child, Froebel adds (p. 131): "So with this plan, nothing need ever exist without relation to something else, nor must anything appear without relation, as in actual life nothing ever exists separate and without relation. To develop man's inner as well as his outer eye from an early age, for the near and distant relations of life, is one of the ultimate and highest aims of these plays." Again and again he speaks of "the inner speech of things," showing that he belonged to that class of minds which finds books in brooks and sermons in stones. The difficulty which many people have in understanding Froebel is that they go to him expecting to find merely another German philosopher, or at most only a profound teacher of a new pedagogy, whereas his greatest merit is that he is a poet and inspires all his true followers with the poetic conception of nature and of man, of God and his universe, which inspiration Mr. Hamilton Mabie has described as "a divine enthusiasm for hard work."

The remaining chapters on the Fourth and Fifth Gifts follow the same general line of thought.

The very interesting chapter on the "Movement Plays," when compared with Newell's *Games and Plays of American Children*, teaches us how the elements which psychologically attract the child in the old historic games of the street may be retained, purified from their coarse and oftentimes debasing suggestions. The limits of a magazine article forbid the discussion of this not generally understood phase of Froebel's work.

The book closes with a chapter on "How Lina learned to write and read," which no doubt will bring down a storm of criticism from the advocates of "sentence methods," but which I most devoutly wish every primary teacher and every mother in the land might read and take to heart.

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An Introduction to the study of society—By ALBION W. SMALL, Ph. D., Head Professor of Sociology in the University of Chicago, and GEORGE E. VINCENT, Vice Chancellor of the Chautauqua System of Education. New York, Cincinnati, Chicago : American Book Company, 1894. 384 p. $1.50.

In some reviews of Small and Vincent's *Introduction to the study of society*, whether from a sense of duty or because it is pleasant to look down from an assumed elevation, the various writers have endeavored to belittle this pioneer work. It is a pioneer in the same sense that the occupants of the "prairie schooner" (p. 101) are pioneers. These people were not the first and only representatives of their race who have built and resided in a hitherto unoccupied field, but they were the earliest occupants of a particular locality in the then unsettled West.

It would little become some chance explorer from the cities of the East to criticise the hinges on the barn door of the first settler because they were not of steel and brass, or to say that brown stone would have been in better taste than logs for a residence. The settler was forced to use the materials at hand. There were in his vicinity no experts in the industries upon whom he could call for materials and assistance; but he made a home fit to live in and so used the few tools he brought from another home as to be justly honored by those who came later to the growing community, and who had a better chance for progress than he.

Professor Patten objects to any use of "biological analogies in the discussions of social questions." Professor Giddings is very certain "that sociology must abandon the biological terminology," and Professor Powers says that "it cannot be too strongly insisted that a science of society cannot be constructed out of vague biological images." In making these statements the writers named do not refer to the essential portions of the book, for the authors frequently mention that they do not insist upon biological comparisons. I am not desirous of combating any of these statements of earlier reviewers, but will rather inquire, Is a man to be prohibited from using a needle because no sewing machine has been invented, or from traveling by rail or ship because flying has not yet been proven a success?

Small and Vincent say on p. 90, "The use of the term 'Anatomy' does not compel us to find analogies between societies and different kinds of animals where none exist, or between every part of society and some part of an animal body." On p. 169 I find, "Again we warn the student against the dangers which lurk in analogies between the social organism and any particular zoölogical type, such as the human body. It should be borne in mind that certain relations of coexistence, interdependence, and growth are exhibited by the associated life of men, and that it is upon these essential relations, not upon fanciful similes, that the organic theory bases its claim."

One reviewer would dismiss the book from college halls by the following: "The attempt to make one book for the college classroom and for Chautauqua is a mistake. It inevitably results in a book for Chautauqua."

When all has been said, of this nature, that can be said, it still does not follow that Small and Vincent's *Introduction to the study of society* is not a very useful book. It certainly accomplishes what it claims, on p. 99, is one of its objects, viz., "To suggest to the student a method of observation, which seeks to gain a conspectus of all social activities in their interrelations, not scrutinize separately one department of life."

No one would be rash enough to claim that this work as a whole does not contain some chapters that might have been better treated, or that the authors themselves, at a later period, may not desire to modify it, but the merits of a book certainly deserve as much attention as its faults. Early inventions of all kinds are crude, but by using them we learn how improvements may be made; and Professors Small and Vincent would richly deserve the thanks of students, if they had done no more than publish the lists of "Subjects for investigation" which are found at the end of each chapter.

When a book is exactly what it professes to be, no more ought to be demanded of it. It is manifestly unfair to assume that the authors have said all they wish to say upon the subject of sociology in an introductory and elementary work, and then criticise them on that basis. The critics should determine how far an author has accomplished his aims. For being exactly what it claims to be, *An introduction to the study of society* is certainly a successful book.

The present writer made the experiment of using Small and Vincent's *Introduction to the study of society* with a class of seventy students at Indiana University, mostly freshmen. The keen interest of all in observing for themselves various social phenomena, after the manner suggested in the book, is not often seen. Book II was often mentioned with admiration by the students for its suggestiveness.

Really valuable studies were made by some members of the class, upon several of the subjects suggested for investigation. Three of these deserve special mention: No. 9, p. 234, "A chart and explanation of the channels through which psychical impulses come to a given institution (college)"; No. 10, p. 234, "A chart and explanation of the channels through which psychical impulses go from the same institution (college)"; No. 8 p. 302, "An analysis of the causes which admit ill-trained teachers to the public schools." In the last, each student wrote concerning one or more cases of which he could speak from positive personal knowledge.

GEORGE EMORY FELLOWS

UNIVERSITY OF CHICAGO

English in American universities—By Professors in the English Departments of twenty representative institutions. Edited, with an introduction, by WILLIAM MORTON PAYNE. Boston: D. C. Heath & Co., 1895. 242 p. $1.00.

American newspapers and magazines are showing an active interest in college life and work; particularly, perhaps, in college play. We hear a great deal about athletics, about the picturesque sides of life in college communities, and, not infrequently, about the organization and methods of our "universities," as we are somewhat prone to call them. *Harper's* recently printed a series of articles descriptive of several of our older colleges; other monthlies seem to be drawing from kindred material, and even the daily press goes out of its way to ponder over problems of college ethics or administration which, in other countries or other times, would have been regarded as matters of distinctly local rather than national interest. All this goes to indicate the firm hold that the intellectual training of our young men has on the attention of the people at large. It is good to think that pedants and theorists alone are not directing education, but that the people at large feel directly concerned in it, have suggestions to make and schemes to offer, and insist, with stern common sense, that education in conformity with the greatest and plainest interests of the people shall exist and prosper. Especially is the question of training in the English language and literature widely discussed and its importance deeply felt. From far and near comes the call for good methods on the part of instructors and earnest effort on the part of students. Of this the present volume is a sign. The Chicago *Dial* has published within a year or two a long series of articles on the teaching of English in American colleges, contributed by representative professors from various well-known institutions. These are now reprinted, with an introduction which surveys the whole field of inquiry, by Mr. Payne of the *Dial.*

The twenty department manifestoes give a very fair idea of English instruction in this country, though we miss reports from Brown, Bryn Mawr, the Massachusetts Institute of Technology, Smith, Vassar, and Williams, to mention only important Eastern institutions, and in at least one notable case, that of Cornell, we have only the most meager information in regard to the whole body of instruction given in English. From an examination of the records given, I should say that there were three points particularly to be noted in the work now going on throughout the United States. First, the degree to which the college study of English is philosophically planned and organized is simply surprising. The day of scattering courses, following the whims of individual instructors, seems to be over. Each branch of study is now treated as a part of the whole group of English studies, in which, and for the good of which, it exercises its peculiar functions. In this necessary organization the Western colleges seem to be stronger than the Eastern. The most broadly and thoroughly planned scheme, that in force at the University of California, is in many respects radically different from the common Eastern type, and deserves the careful study of teachers throughout the country. Second, the fervor with which English studies are pursued is no less extraordinary. At the University of Michigan, for instance, says Professor Scott, "the number of students who elected courses in English the past year, not allowing for names counted twice, was 1198. To this number should perhaps be added 110 applicants for work in composition for whom provision could not be made. The distribution of the electives was as follows: In modern literature, 225; in old and middle English literature, and linguistics, 252; in rhetoric and composition, 721." In other colleges the interest is only proportionately less. Our young men are turning, with a vigor that promises well for our national civilization, to the study of our own tongue and our own literature. Third, the newborn zeal for the study of literature rather than linguistics is rapidly increasing. The older Germanic ideal is, however, far from being neglected. It is amazing to notice how, even in the most remote parts of the country, philological work is going on, which, so far as its methods go, out-Berlins Berlin, and shows the inexhaustible zeal for the minutiæ of English learning possessed already by our scholars and fostered by them in their pupils. But the love for literature grows apace. "We use no text-books," is again and again the report; "our pupils feed directly on the masterpieces of English literature." Indeed, the movement seems to be toward seeking instruction from men who are critics rather than scholars. It is evident, says the editor, that a professor of English literature "must have a thorough training in the history of criticism, from Aristotle to Pater; that he must have a wide acquaintance with literature, ancient and modern, native and foreign; that he must have a delicately attuned ear and a cultivated æsthetic sense; that, finally, he must have in an unusual degree the power of giving literary expression to his thought, and something like a passion for bringing other minds into sympathetic communion with his own. He should be, in a word, as nearly as possible such a man as Arnold, or Lowell, or Sainte-Beuve, among the dead, or as M. Brunetière, or Mr. Watts, or Mr. Stedman, among the living. Men of this type, or approaching this type, some of our universities already have; the others may obtain them if they will but enlarge their horizon sufficiently to recognize the fact that for the work of giving vital instruction in English literature other than merely academic qualifications are needed; that such qualifications are, indeed, of but secondary importance." If this is what the country as a whole feels, and the reports show traces of a growing tendency in that direction, the next quarter-century is likely to witness radical changes in our whole scheme of English instruction.

It must not be forgotten, however, that such reports as these are necessarily misleading. They are what professors plan to do, not what they do; they are what instructors offer, not what pupils receive. American boys are not Germans; they do not meekly memorize truths dictated to them by authority. They are quick, on the other hand, to appreciate the spirit in which instruction is given them, and to learn more by the privilege of looking at the world through a professor's eyes than by all the facts or theories he can pile up before them. The question still remains, then, not what are we trying to do, but what are we actually accomplishing. What does the American boy learn, at these twenty colleges, of his own tongue and his own literature, and what kind of man does he become in consequence? What do all this ardent teaching and zealous study add to American civilization? These are legitimate lines of inquiry, which are still to be taken up.

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COLUMBIA COLLEGE

A complete geography—By ALEXANDER E. FRYE. Boston: Ginn & Co., 1895, $1.25.

Mr. Frye's *Complete geography* is an interesting and important product of text-book work. It has a goodly number of valuable new features that render it attractive and useful, and yet it is sufficiently in touch with old methods and text-book forms to prove practically acceptable to the great body of teachers. It is a book likely to fit the times and present needs in schools. And yet the times are changing so rapidly that another revolution of the wheel may bring it into sight partly out of date.

Thoughtful teachers have been much dissatisfied of late with the geographies in use. But the person who undertakes a new book, especially if it has any radical features, will soon find that he is grappling with larger and larger difficulties. Geography, as popularly conceived, includes nearly everything, and, with so many important and really difficult topics, it is almost impossible to treat them with pedagogical skill in a book of portable size. Then, in order to make a book that will suit all parts of the country, the author is compelled to cut out a general conventional pattern that almost anybody can wear, but that fits nobody very well. It may seem absurd to ask a child in Maine to use the same text-book as another from Louisiana or California, or for a boy from a Colorado mining town to share his lesson with a prairie boy from Illinois, but this is a practical demand. The chief objection of good teachers to the geographies is that they fail to give the children clear and significant ideas and attractive pictures of the world. The books are too general and formal, too dry and verbal. Any book that will help the teachers and pupils out of the mechanical ruts will be a godsend. Mr. Frye's book is certainly a very helpful and stimulating text, and will do much to awaken a healthy interest in this study. He has met the great difficulties of his task with a large degree of skill and success. I shall first mention some of the points of excellence.

1. One of the chief merits is the controlling influence of a few leading topics. The author has really had a few important things in mind and has kept them steadily in view, one at a time. One of the great difficulties is, out of the mass of materials, to select a few topics of prime importance, and then to neglect everything that does not help to an understanding of them. The discussion of the Western Highlands of North America is an example of such sustained effort. The author has clearly had such centers of thought and has kept within narrow limits. This is a marked improvement.

2. The book contains a body of interesting and instructive information which will appeal to children. In this respect it is decidedly a superior text-book. The trouble with most geographies is that they have reduced to perfection the art of saying important things in the dryest way. This author assumes that children have feelings and sensibilities as well as memories. He evidently surveys a large body of information, and selects those details that at once illuminate the subject and appeal to the thirst for knowledge.

3. In the matter of maps the book contains a series of valuable improvements in text-book work. One of the most striking features is the new set of relief maps. The large map on pp. 34 and 35 is a notable success, and the smaller maps of the same kind distributed through the book are equally valuable. It will be said that it is better for children to make these maps in clay or sand. Very well, but these maps will reveal to them what to make. The plan also of presenting a set of simple maps, with only the more important features, and of following these, at the end of the book, with larger, fuller maps, recommends itself strongly. Again the small maps of the United States, representing separately the different regions of production, as of forests, cotton, coal, wheat, and iron, are one of the best features of the book from a pedagogical standpoint. The map questions are partly of the stereotyped form common in geographies, and partly suggestive of thoughtful comparisons and sequences.

4. In the use of pictures this book has struck out a new line

that will be imitated. The pictures are not only new and attractive, but they are an essential part of the instruction. They are frequently referred to in the text, and the text depends largely upon them for its meaning. These pictures should be studied and discussed in classes as thoroughly as the maps, and the author's own use of them will encourage teachers to do this. In the first survey of the book I was struck with what seemed an overplus of pictures. It seemed like an effort to overdo the "picture business." The book would certainly look better, even to a not very critical observer, if it had fewer pictures. Most of those retained might be enlarged and made more distinct. For example, the large picture of the Westminster Palace at the bottom of p. 160 is much finer and worth more than the group of five pictures at the top of the same page. The smaller pictures are often not clear enough, and yet they will be very helpful to teachers who know how to use them and to interpret by means of them. The grouping of the pictures is also suggestive of comparisons and of an underlying larger thought.

5. The author, as indicated in the preface, does not insist upon any strict order of topics. This is an important concession. Teachers in different parts of the United States should use this book and arrange its materials to suit their own needs.

Cross-references and comparisons are also numerous in the treatment of topics in different parts of the world. This is suggestive to teachers, and will, to some extent, show them how to use a book without being a slave to its text.

There is no doubt that the author would have gladly put in more concrete and illustrative material, if the size of the book had permitted. As it is, the book is probably too large. Mr. Frye's book gives teachers enough of such interesting detail in pictures and in the text to whet the appetite; and a live teacher will go still further in using references, descriptions, pictures, and other collateral aids, not so much for the purpose of adding new facts as for getting a deeper and more lively appreciation of those treated in the book.

I shall next consider a few points of criticism. Mr. Frye's book is an effort to make a geography that will prove acceptable to the schools and to the trade, in all parts of the United States. I have noted the difficulty of this task, and it will grow more difficult every year. In a few years such a thing may indeed be impossible. It is a curious fact that this book stands by itself in the school course, in strict isolation and independence of other studies. Within the past year or two no idea has given teachers more to think about than the relations between the studies, and geography is generally acknowledged to have more numerous and important relations to all parts of the school course than any other study. But the making of this geography is in no important respect dependent upon the course of study in other branches. Nothing is more clear than that in the re-organization of our school course, now already begun, it will soon be impossible to make out the course of study in any one subject without considering all the others. Geography has many points of contact with all the other studies, and yet Mr. Frye has given us a book which lays out the entire course in geography without the least consideration of what is taught in the other studies during the corresponding years. This book is built upon the old theory that school studies should be kept clearly isolated from each other. The new theory is that they should be joined together by all the patent couplings and linkages. This criticism will not disturb Mr. Frye at present, and yet it will be only a short time before a course of study in geography will have to be made out for the common schools which allows a very strong influence to history, reading, and natural science in determining the selection and order of geographical topics.

Moreover, Mr. Frye's book contains a somewhat full treatment of several important questions which will have to drop out of geography entirely. Such are the large topics on plants and animals (pp. 107–118). As discussed in this book these are almost purely scientific topics, and they will find their place eventually in the regular science lessons. Animals and plants have a good deal to do with geography, but not in this purely scientific form. The topic on Distribution of People (pp. 123, 124) is not geographical but historical, and has no proper place in this book. If American history is properly taught in the schools, this topic may be omitted in the geography. Nor will this mean neglect of the important relations between history and geography. These will find their full opportunity. Much also of what is said about races and religions will drop out for similar reasons. The reason why such topics are now taken up in text-books of geography is that the relations of geography to the other studies have not been fixed, and the proper distribution of topics to the different sciences has not been made. The fact is that natural science has had no recognized place in most schools, and geography has dragged a lot of this very interesting material into its own domain and appropriated it. In the new course of study which is being worked out, geography will have to disgorge a good share of its booty and turn it over to the proper owners, history and natural science.

In view of what may be expected in the development of geography as a school study, another important criticism is suggested. It is a question of method in the treatment of important topics. They are usually handled in too abstract and general terms to awaken the thought and interest of children. The statements are too brief and compendious, too condensed and shriveled up, too much stripped of the concrete and graphic detail which alone can arouse the children. Mr. Frye's book is a decided improvement in this respect, but even here he has not yet taken the bull fairly by the horns. His topics (in their beginning) are still too large and unwieldy for the child mind. He needs to work more inductively, from smaller topics to larger ones; beginning first with concrete phases and real types, and working up eventually to the larger generalizations. For example, the whole broad surface-features of a continent, the commerce of the world or of a nation, the broad survey of climatic conditions of winds and rains, all these are too comprehensive and abstract to be grasped at the start from general propositions. And yet they are the very ideas that children must attain to. Teachers seem slow to perceive that the inductive method of gradual approach, through concrete typical illustrations to large general truths, is the true pedagogy of geography as of all other studies. Here is, in my judgment, the principal secret of method, which eludes the scrutiny of so many teachers. Most teachers have never yet lost their faith in general statements as a means of introducing a knowledge of any science.

I do not regard Mr. Frye as one of the great sinners in this respect. Indeed, he has struggled manfully against this powerful tendency of the text-books to generalize ahead of time, and his book is certainly a great improvement over others in this respect. He has still left the main problem to be solved by others.

In spite of these criticisms, which apply to the future rather than to the present, Mr. Frye's work will be a great help to teachers and schools.

CHARLES A. MCMURRY

NORMAL, ILL.

Gildersleeve's Latin grammar—Third edition, revised and enlarged. By B. L. GILDERSLEEVE and GONZALEZ LODGE. New York: University Publishing Co., 1894. 550 p. $1.20.

A Latin grammar—By CHARLES E. BENNETT. Boston: Allyn & Bacon, 1895. 276 p. 80 cents.

An appendix to Bennett's Latin grammar—By CHARLES E. BENNETT. Boston: Allyn & Bacon, 1895. 246 p. 80 cents.

When the first edition of Professor Gildersleeve's grammar appeared in 1867, it met with a very cool reception from teachers of Latin in general. The traditions of English classical scholarship were still strongly intrenched in American colleges and schools; and these were, if anything, more conservative than in England. Americans were then only beginning to look to Germany for scholarly inspiration and suggestion; and everyone was perfectly well satisfied with what he knew or thought he knew. Into this serenely restful atmosphere Professor Gildersleeve projected his grammar with a bang that profoundly disquieted the nerves of many estimable men. There was an audacity and irreverence about his views, and a certain snap and crackle about the expression of them, quite unknown to classical literature in this country. For a long time, in many quarters the book was looked upon askance as a more or less eccentric production with a very suspicious flavor of heterodoxy about it; and as a result of this, it at first seemed to fall rather flat. Little by little, however, as the point of view of American scholars began to change, Professor Gildersleeve's grammar crept slowly into a place of honor, until at last it was cited side by side with the popular manuals in all discussions that were more than elementary. It was revised and passed into a second edition in 1872, and now comes forth in a sort of triumphant apotheosis, as the most complete and scholarly grammar of the Latin language that America has yet produced.

In the present edition a very large amount of new material has been incorporated, chiefly on the side of historic usage, though the senior editor has here and there modified his earlier views of syntax in the light of the later investigations. A supplementary note, added to the preface by Professor Lodge, serves to remind one how vast an amount of most productive work has been done in the past twenty-five years, all of which has been utilized in this greatly enlarged volume with its 550 pages of text as against the 384 pages contained in the grammar of 1872. Schmalz, Landgraf, Hale, and Haase in syntax; Seelmann in pronunciation; Brugmann in morphology; Gleditsch, Klotz, and Plessis in prosody—these are but a few of the names that serve to indicate the stores upon which Professor Lodge has drawn for the enrichment of this manual. In the orthography, Brambach has been largely followed; and in the marking of the natural quantities, Marx is accepted as a standard, which is perhaps the best thing that the editors could have done in a field where so much is still left to the imagination.

This is, of course, not the proper place for a consideration of the various technical questions suggested by a perusal of the book. A comparison of it with the preceding editions will show that many of the editor's earlier dicta have been modified, but much less than one might have expected. In some cases, views which were in 1872 regarded as novel and perhaps erratic, have secured a general acceptance. Especially satisfactory to the classical student will be found the new section on prosody and versification, which covers the field of the early Latin, and includes the latest theories on the Saturnian. Somewhat disappointing is the very meager treatment of the Latin accent, occupying only a few lines of minute type; and so, too, is some of the etymology, from an historical point of view. A page or two with reference to the other dialects of Italy would have given a greater completeness to the work, and would have been in line with the requirements of modern scientific teaching. The typography and mechanical execution of the volume are very attractive, and make its use agreeable to the eye.

Some six months ago the present writer expressed in these pages the hope that before long a Latin grammar might be written that should embody only the essentials of the subject, casting aside altogether the disheartening mass of rubbish and repetition that so often appall the beginner and drive him shuddering into an Ollendorf or the arms of a professor of the so-called "natural" method of teaching languages. The opinion was then hazarded that such a grammar could be written within the compass of a hundred pages. Professor Bennett's attractive little volume, whose appearance fulfills the hopes that were then expressed, extends to 265 pages, but as they are not large and are printed in a plain, clear type, well "leaded," the editor may be said not to have exceeded a proper limit. Teachers of Latin, especially in the secondary schools, will welcome the book as one of the many contemporary indications of the dawn of an era of good sense in the teaching of the classics. Here is everything that a preparatory student ever needs in the way of grammatical information, clearly and concisely put, and with not an unnecessary line or a superfluous rule. It is wholly modern in its teaching, accurate beyond any reasonable criticism, and is evidently the work of one who very happily combines ample scholarship with the experience of a practical teacher.

The condensations have been effected principally in the omission of the innumerable exceptions that clog the pages of the larger grammars and thus too often give an unmerited dignity to the mistakes of the ancient writers by teaching the student to regard them as subtle and sacred things; in omitting from the body of the grammar the usual discussion of the order of words; and by a very great brevity in the treatment of the prosody and versification, from which are omitted even the meters of Horace and Catullus. The historical element is also wholly excised. All this condensation, so far from proving a source of error to the student, is a positive gain, since he will now at once perceive the essential simplicity and symmetry of the language, and will find no excuse, as heretofore, for complaining that he cannot see the wood by reason of the trees. In twelve pages, placed at the end of the book, Professor Bennett has summarized with admirable lucidity the more essential points relating to the order of words and the general subject of Latin style—a section that is most helpful and instructive.

Of even greater interest and value is the Appendix to the Grammar, which is issued as a separate volume, and which is especially intended for the use of teachers. In it Professor Bennett takes up certain questions that have, in the last ten years or so, come into great prominence in the study of Latin, and that have heretofore not been set forth collectively in a simple form. These topics are the pronunciation of Latin, the determination of "hidden" quantities, accent, the subject of disputed spellings, the phonetics of Latin, the inflection of the language, and certain questions of syntax whose discussion was of necessity omitted from the body of the Grammar. It is no exaggeration to say that so compact, helpful, and practical a collection of indispensable information cannot be found elsewhere in any language whatsoever. Even in Germany, the home of classical enchiridia, nothing has yet appeared that is so satisfactory. Professor Bennett seems to divine by instinct just what questions arise in the mind of the student, and he here answers them in advance in a delightfully lucid and simple fashion. To teachers, and especially to those teachers who do not read German with facility, the chapter on hidden quantities will prove the most valuable and timely feature of the book in view of the prominence that is now given to the subject, even in the preparatory schools—a somewhat faddish prominence, in the opinion of the present writer, but one that cannot be ignored by the teacher whose motto is *Soyons de notre siècle.* Professor Bennett very properly takes issue with Marx on a number of his dicta as to the length of syllables; and whereas in the Grammar, the vowels are marked in accordance with Dr. Lewis's dictionary, in the Appendix the author's own convictions and conclusions prevail in all the markings. Everywhere the best authorities are cited, and it is certain that to many teachers as well as students the mere perusal of this little manual will open up many new vistas, and will put them in touch with the most scholarly doctrine of the day. In fact, the book is one that no progressive instructor can afford to be without, as it summarizes an immense amount of information that is of the utmost practical importance.

These three books, taken together, are a most valuable contribution to classical scholarship, and are the best kind of evidence that the study of the classics, so far at least as Latin is concerned, is by no means losing its hold upon the attention of American scholars; but that its claims are likely to be more and more fully recognized in the future, as its advocates bring to bear on its behalf an irresistible combination of sound learning and practical good sense.

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VIII

EDITORIAL

With the adoption of the recent amendments to its constitution,[1] the National Educational Association may fairly be said to have entered upon a new career of usefulness and importance. Since attaining national significance in 1884, at the Madison meeting, the Association has gained a commanding place in the affections of the teachers of the country. Its truly national character, its catholicity, and, more lately, the passing of the political element, have served to attach to it the most earnest and representative instructors in the country, whether their own personal work lies in a kindergarten or in a university. The service that the Association is rendering and has rendered to the cause of education can hardly be overestimated. Its funds have been liberally appropriated in support of educational conferences and investigations, and the Reports of the Committee of Ten on Secondary School Studies and of the Committee of Fifteen on Elementary Education have already become educational classics. That the forthcoming Report of the Committee of Twelve on Rural Schools will be of similar weight may be confidently predicted.

With so large and complex and influential an organization under full headway, it is not to be wondered at that those officially charged with the responsibility for its guidance should be conservative and cautious. It may not always be possible to collect a large annual income, through the railroads, from the associate members, as is now done. Already grave difficulties are encountered in making the arrangements necessary to continue the present policy. The Association must eventually be in a position to carry on its work, independently of the varying income received from associate members. To make this possible the invested funds should be not less than $100,000. They will soon amount to something more than half of that sum. With a permanent and assured income of $5000, the work of the Association would be secure.

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[1] EDUCATIONAL REVIEW, X: 197.

Sometimes the suggestion is made that the Association ought to purchase a permanent headquarters and hold all its meetings there. Such a proposition is ill-considered and not to be entertained for a moment. A large part of the benefit wrought by the large annual meetings is due to the stimulus given to the section in which the meeting is held, and to the broadening of view and of intellectual horizon of those who travel some distance to attend. No price is too great to pay to secure the continuance of these advantages. New Jersey and Colorado will long show the good effects of the great meetings at Asbury Park and Denver.

Readers of the EDUCATIONAL REVIEW are already aware of the struggle carried on last winter for public-school reform in New York City, and of its outcome.[1] It is probable that the fight will be renewed before the next legislature, and continued until the Platt-Tammany combination and their allies, the teachers' "ring," are beaten. The great importance of the issues involved is ample justification for reproducing here, for the information of readers in other parts of the country, an editorial on the existing situation that appeared in the New York *Evening Post* for October 2. It is safe to say that that newspaper reflects accurately the sentiments on this subject of nine-tenths of the intelligent and independent citizens of New York City. The article in question is the following:

> The announcement that the Board of Education proposes to submit a new school bill to the next legislature may serve to remind those citizens with short memories that the Committee of Seventy's school-reform bill failed to pass the Senate of 1895, and that substantially the whole ground of school reform must be gone over again. In removing some of the worst of the Tammany commissioners, and in his admirable selections for school inspectors, Mayor Strong has contributed not a little to the improvement of the old order of things. The ward trustees recently chosen are of a much higher type than their predecessors, and some of them are ideal appointments. President Maclay and his associates have also been energetic in planning for new and adequate school buildings and in putting the older structures in decent order.
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> But the Board of Education, the ward trustees, the inspectors, and the buildings may all be of the best, and the schools may still remain the same listless machines that they have been for a generation. Not many members of the present Board of Education are competent critics of the details of school work, and not many of them would know just what steps to take to

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[1] EDUCATIONAL REVIEW, X : 98.

improve the educational efficiency of the schools, were their shortcomings clearly understood. Commissioners Peaslee, Hubbell, Prentiss, and one or two more have had the training and experience necessary to enable them to take the lead in this matter, but whether they could command a majority of the present board for their proposals is quite uncertain.

Experts and intelligent observers generally are agreed that what the New York public schools most need is enlightened and authoritative supervision. And school supervision in the modern sense means intellectual leadership and guidance, as well as the performance of the routine that in this city is officially supposed to be sufficient. Such supervision as Cleveland has—as Denver, St. Paul, St. Louis, and Brooklyn have—is not possible in New York under the provisions of existing law. With twenty-four local, or ward, boards of education to contend against; with their jobbery, their favoritism, and their susceptibility to local "pulls," no superintendent of schools can freely and authoritatively supervise. The Superintendent must be clothed by law with the power that is the necessary accompaniment of his responsibility. He must be able to keep poor teachers out of the schools, and to weed out promptly the inefficient and the ignorant. The entire educational oversight must be his, and his alone; subject, of course, to appeal to the Board of Education in matters affecting personal rights. Where the best schools are to be found, there the Superintendent possesses most power, although he may make but little parade of it.

With the ward trustees out of the way, with one central responsible Board of Education clothed with full power, and a superintendent whose duties were clearly defined by law and supported by the by-laws of the Board of Education, the way would be open to resuscitate the public schools of this city. The next step would be the selection of a competent superintendent, for probably no one whose judgment is worth having considers Mr. Jasper a competent or even a creditable incumbent of that office. At least one-half of his staff of assistants are men of like caliber with himself, and would never have reached their present positions except through political influence. It is one of their professional jokes that "to get and hold on to eleven votes"—that number being a majority of the Board of Education—is the chief aim of their official existence. These people should all be swept away by any board that calls itself a "reform board." The natural assistant superintendents of schools are the principals, each of whom should be a direct subordinate of the superintendent and be held responsible for carrying out the instructions to the letter. Competent supervisors of special departments, such as kindergarten, drawing, music, and physical training are desirable and necessary, but the assistant superintendent, as he exists at present, can be easily spared.

The moment that a competent and experienced superintendent made a tour of the schools he would discover that they lack high ideals, modern scientific information, and the spirit that is so significant in many of the Western cities. He would find that the average New York teacher is not a student and not a reader of the literature of her profession. He would find no traces of other than a statistical supervision of the schools. He would find, in short, not a system of schools at all, but a haphazard collection of ward schools, some of them very poor, some of them fair, but very few of them wholly satisfactory. The first task of such a capable superintendent as we have in mind would necessarily be to gather the principals and teachers about him for instruction and inspiration. A fairly educated clerk could keep the statistics of his office; but no one save a trained scholar and an experienced superintendent can ever hope to rouse the teachers from their lethargy and their machine methods. Such work as Superintendent MacAlister did ten years ago in Philadelphia would have to be repeated here. As was the case there, many of the principals and teachers would doubtless hang back, hoping that the reform wave would pass over and the old status be restored. But much could and would be accomplished. After ten years of such an administration the schools would be metamorphosed.

One suggestion that is known to have supporters among the members of the Board of Education is the one for a paid school commission that was embodied in the preposterous Bell bill of last winter. The real paid commissioners ought to be the superintendent and his staff of supervisors and the superintendent of buildings. All detail work should be theirs. To associate with them paid commissioners would be to invite interference and controversy, and to perpetuate the evils that it is sought to avoid by abolishing the ward trustees.

Among the New York Good Government Clubs, Club E has paid most attention to the public schools. This is due largely to the intelligent and sympathetic interest in education taken by the club's president, Mr. J. Augustus Johnson. Under Mr. Johnson's direction an important report has recently been published by Club E that reviews the reforms accomplished and set in motion since Mayor Strong took office, makes recommendations as to further improvements, and prints some exceedingly interesting statistical tables. It is work of this sort that will eventually redeem the New York city school system. An aroused and enlightened public opinion will refuse to submit to the bossing of the schools by local politicians and organized bands of inefficient principals and teachers. It is significant that both New York and Philadelphia, the only two large cities in which ward school boards exist, should be trying to free themselves from the system, and that in both places no inconsiderable number of teachers are found who join the politicians in defending the existing abuses.

It is announced in the public press, presumably on good authority, that Dartmouth College proposes to develop courses designed to prepare students for the degrees of M. A. and Ph. D.—in other words, that Dartmouth aims to become a university. If the report is true, the fact is greatly to be deplored. As a typical American college, doing legitimate college work, Dartmouth has long since won a high place on the roll of honor. But as a university, inviting comparison with Harvard, Columbia, Johns Hopkins, Chicago, and Cornell, her resources would be very scanty. Her graduates could do far better, in almost every instance, by pursuing their advanced studies at a foreign or American university, than by remaining at Dartmouth for a post-graduate course. And what is true of Dartmouth is true of a hundred other colleges as well. Much wiser was the determination lately arrived at by Vassar College, under the lead of President Taylor. That institution, while providing attractive opportunities for a year's study by resident graduates, distinctly disavows any thought of entering upon the work of a university.

One good effect of the new compulsory education law in New York State has been to compel the transfer of the Institution known as the Truant Home in Brooklyn from the control of the Board of Aldermen to that of the Board of Education. The police magistrates had been in the habit of committing to this institution not only habitual truants but vagrants and young criminals of all kinds. Thus children whose only fault was truancy were compelled to associate with criminals and, doubtless, to learn the lessons of crime. Nor was this all. Under the management of politicians the Home had been conducted as a penal, not a reformatory, institution; for the benefit of the managers and their employees, and not for the benefit of those committed to their care. When it came under the control of the Board of Education, the sleeping quarters of the boys were found to be comfortless in the extreme; the dining room in an unwholesome cellar; the kitchen arrangements repulsive to the last degree; the bathing and other sanitary arrangements wretched; and books or anything else to relieve the tedium of the prison-like life conspicuous by their absence. The process of transforming the whole character of the institution will necessarily take time, but has already commenced. The building is being thoroughly renovated and made clean and wholesome. A library of cheerful reading is being collected. New dining rooms, kitchens, and workshops are to be added. Proper facilities for instruction will be afforded. Each boy will be given a plot of land to cultivate as a garden. In short, everything possible will be done to render the Brooklyn Truant School—as it will be called hereafter—an institution in which boys who proved incorrigible in the public schools will be surrounded by those influences and subjected to that discipline which promote strength of character and inculcate self-respect and respect for the rights of others.

In the tragically sudden death of Professor H. H. Boyesen, not only Columbia College but the entire country suffers a severe loss. Professor Boyesen's scholarly studies and confining literary work had enriched rather than diminished his abundant store of human interest and enthusiasm, and he was one of the strongest links between the university life of America and the great world outside of academic walls. By his writings and his lectures he had reached an immense audience scattered through the whole United States, and had aroused in them an appreciation of literature and literary art. In the classroom he was extremely popular, and his interpretation of Goethe's *Faust* was a course that no serious Columbia undergraduate was likely to miss. The men who, like Professor Boyesen, serve both their own institutions and the country at large are far too few. Every university should seek out some such men, and make it easy for them to exercise their talents freely. Such a service is one of the highest and most useful that a modern university can render. For fifteen years Professor Boyesen has made the name of Columbia College familiar to thousands, and his peculiar place will not be filled.

For the Jacksonville meeting of the Department of Superintendence, to be held on February 18, 19, and 20, Superintendent Jones has planned a very rich programme, and it is quite safe to say that several hundred members of the Department will make the journey to Florida to hear it. Problems of detailed supervision, The rural school question, Co-ordination of studies, and Ideals in education, are the topics to occupy the morning and afternoon sessions. Among the speakers appear the names of Commissioner Harris, Professor Hinsdale, President De Garmo, Principal Lyte, President Baker, Professor E. S. Joynes, and Superintendents Treudley of Youngstown, Phillips of Birmingham, Reinhart of Paterson, Sutton of Houston, Gordon of Camden (Ark.), Gilbert of St. Paul, Inglis of Illinois, Cooper of Galveston, and Whitney of East Saginaw. The evening addresses are to be by President Schurman of Cornell, Miss Elizabeth Harrison of Chicago, and Dr. J. L. M. Curry of Washington. On Thursday afternoon an important series of Round Table discussions are planned.

On the 11th and 12th of October the New England Association of Colleges and Preparatory Schools held its tenth annual meeting at Brown University. The service of this body—the earliest of its kind—in bringing into close working companionship teachers in college and teachers in preparatory schools is a matter of general knowledge. Its members meet, not merely for the purpose of hearing good papers on interesting educational themes,—a purpose laudable enough in its way,—but more especially for the furtherance of some specific interest common to school and college. In consequence their proceedings are always marked by directness and definiteness, and usually, also, by practical results. The recent meeting was not an exception to this general rule.

There were in attendance about two hundred members and guests (for the meeting is only semi-public), an audience thoroughly representative of the colleges and secondary schools with which New England abounds. There were men and women from the large universities and small colleges, and from high schools and endowed academies. The discussions were correspondingly earnest and thoughtful, and repeatedly reflected valuable experience in actual instruction.

The first session was occupied with the subject of college requirements in history. Before the Association were certain resolutions presented by a conference on history requirements, which was organized last winter by the Executive Committee at the request of Professor Start of Tufts College. These resolutions were supported by a printed report, signed by the members of the conference—Dr. Huling, Professors Coman, Hart, and Start, and Miss Thompson. The discussion began with an admirable paper by Professor Albert Bushnell Hart of Harvard, in which he gave reasons for the acceptance of the improvements in methods of study and of examination provided for in the resolutions.

Mr. A. L. Goodrich of Salem followed, favoring the resolutions in the main, but pointing out some difficulties in the application of them to school work. The debate was participated in by Professors Channing, Hart, and Start; Drs. Tetlow, Hill, Keep, and Huling; Messrs. Fish and Fox, and Miss Whipple. Some of the speakers manifested concern lest the time and difficulty of preparation in this subject should be unduly increased, but in general the opinions expressed were favorable to the tenor of the resolutions. Certain modifications, suggested by Dr. Tetlow, were accepted by the chairman of the conference, and the resolutions were then adopted by the Association, by a vote of 35 to 7, in the following form:

I. RESOLVED, That the colleges be requested to include in their requirements for admission a choice of subjects out of the following topics: (1) The history of Greece to the death of Alexander, with especial reference to Greek life, literature, and art. (2) The history of Rome, the Republic and the Empire to the accession of Commodus. (3) German history, to be so taught as to elucidate the general movement of mediæval and modern history. (4) French history, to be so taught as to elucidate the general movement of mediæval and modern history. (5) English history, with especial reference to social and political development. (6) American history, with the elements of civil government. (7) A detailed study of a limited period, pursued in an intensive manner—any two of these topics to constitute a required subject for entrance to college. The colleges are earnestly requested to accept any additional topic or topics from the list as additional preparation for entrance or for advanced standing.

II. RESOLVED, That satisfactory written work done in the secondary school, and certified by the teacher, should constitute a considerable part of the evidence of proficiency required by the college.

III. RESOLVED, That such written work should include some practice in at least three of the following: (*a*) Notes and digests of the pupil's reading outside the text-books. (*b*) Written recitations requiring the use of judgment and the application of elementary principles. (*c*) Written parallels between historical characters or periods. (*d*) Brief investigations of topics limited in scope, prepared outside the classroom, and including some use of original material. (*e*) Historical maps or charts, made from printed data and comparison of existing maps, and showing movements of exploration, migration, or conquest, territorial changes, or social phenomena.

IV. RESOLVED, That the examinations in history for entrance to college ought to be so framed as to require comparison and the use of judgment on the pupil's part, rather than the mere use of memory. The examinations should presuppose the use of good text-books, collateral reading, and practice in written work. Geographical knowledge should be tested by requiring the location of places and movements on an outline map.

At the evening session, in the absence of President Schurman of Cornell, detained by illness, Professor William Morris

Davis of Harvard gave an earnest address on "Physical geography as a subject for admission to college." He described the study in its modern form, showing how greatly it had changed, how vigorous and valuable a discipline it could develop, and how large is its inherent worth. He also outlined the method of examination that should be employed in it, partly by written test, partly by laboratory work, partly by the reading of note-books, and partly by field work. No formal discussion was had, but in the social gathering of a most enjoyable nature which followed, it seemed to be generally conceded that Professor Davis had made out a strong case for his subject.

At the morning session, the next day, the old officers were re-elected, forty-six new members were chosen, and other routine business transacted. Later there were taken up for consideration certain statements of requirements in Latin and Greek, and certain programmes for preparatory study in those subjects, which had been proposed by the Commission of Colleges in New England on Admission Examinations in their ninth annual report, recently issued. The propositions were considered first from the point of view of the principal of a large school by Mr. Charles C. Ramsay of Fall River, and then from that of a college teacher of the classics by Professors John K. Lord of Dartmouth, and Frank E. Woodruff of Bowdoin. In the subsequent discussion Professor A. G. Harkness, and Drs. Bancroft, Keep, Tetlow, Gallagher, and Peck took part. It was a charming debate, made more delightful by the opening of the windows of their school-rooms, so to speak, by some of the speakers, so that all present could look in and see the actual daily practice of these master-workers in preparatory instruction. In general, the propositions of the Commission met with distinct approval, though some minor differences were apparent. There seems to be a ground here on which practical accord in preparatory classical study and substantial uniformity in requirements are possible and probable. As the subject is still under consideration by the Commission, no formal action was taken by the Association.

During the morning a report was made by the delegates to the Conference on English Requirements. This was the occasion of the expression by Mr. Fox of some objection to the particular works of literature selected by that Conference and to the increase of preparatory work involved. The discussion did not, however, become general. At another point in the meeting the unrest prevailing concerning entrance requirements found expression in certain resolutions offered by Mr. James Jenkins of Worcester, as follows:

> RESOLVED, That the colleges be requested to include in the list of subjects which may be offered for admission physics, chemistry, biology, and physiography, which subjects are now taught in many high schools.
>
> RESOLVED, That in every subject there be an elementary and an advanced requirement.
>
> RESOLVED, That elementary English and elementary mathematics, together with either one ancient or one modern language (other than English) as an advanced subject, be required of all.
>
> RESOLVED, That out of the total number of subjects named by the colleges for admission, the individual pupil be required to present himself in a limited number of elementary subjects and not more than three advanced subjects.
>
> RESOLVED, That for the A. B. degree at least two languages other than English be required.

These resolutions were not debated but were referred to the Executive Committee. It is probable that in some form they will be taken up for discussion at the next meeting. The spirit in which they are offered, namely, the desire that English high schools and, in general, the courses in secondary schools not now preparatory to college, should receive recognition at the college doors, is widely prevalent among the members of the Association, and is likely to be an important factor in the settlement of the questions which cluster about admission requirements, and are pressing for solution. That solution will surely be hastened by the cordial co-operation between the representatives of the two sets of interests involved which is always manifest at the meetings of this body, and has already been mentioned as one of the richest fruits of its ten years of activity.

The great work on the universities of the Middle Ages, by Mr. Rashdall of Oxford, which has been long expected, is definitely promised to appear this winter.

At a recent public hearing before a committee of the New York Board of Education, on the subject of the reform of the system, a ward trustee, whose facility of speech was alarmingly out of proportion to his power of thought, connected or disconnected, declared, with a sob in his voice, that, after critically examining the system from top to bottom, he found "everything to praise, nothing to condemn." Superintendent Jasper, who followed, was more cautious. He admitted the existence of defects, but did not specify them. He stated with great emphasis, however, that the New York public schools had always led the van of progress, and, as his first bit of evidence, cited the fact that the New York teachers had been the first to organize a mutual benefit association.

The Executive Committee of the National Educational Association met at Chicago on October 19, and the place of meeting in 1896 was carefully considered. Asbury Park, Boston, Buffalo, Duluth, and Los Angeles tendered invitations. The general sentiment of the Association seems to be that it is unwise to go to Los Angeles so soon after Denver. It is claimed that Duluth has no proper accommodations for the meeting. Asbury Park is a very popular place, but will hardly be chosen so soon again, since the 1894 meeting was held there. The final decision, therefore,—to be reached at an adjourned meeting at Atlanta, on October 26,—is likely to favor either Boston or Buffalo. At either point a warm reception and an enthusiastic meeting are assured. Boston is the first choice of the Committee, if proper railroad arrangements can be made.

CHARTER MEMBERS OF THE EDUCATIONAL PRESS ASSOCIATION OF AMERICA.

Paper	*Post Office*
American Teacher,	Boston, Mass.
American School Board Journal,	Milwaukee, Wis.
Colorado School Journal,	Denver, Colo.
Educational Review,	New York, N. Y.
Education,	Boston, Mass.
Iowa Normal Monthly,	Dubuque, Ia.
Michigan Moderator,	Lansing, Mich.
New England Journal of Education,	Boston, Mass.
Northwestern Journal of Education,	Lincoln, Neb.
Ohio Educational Monthly,	Columbus, O.
Primary Education,	Boston, Mass.
Popular Educator,	Boston, Mass.
Public School Journal,	Bloomington, Ill.
Pennsylvania School Journal,	Lancaster, Pa.
School Review,	Hamilton, N. Y.
School Bulletin,	Syracuse, N. Y.
School Education,	Minneapolis, Minn.
Texas School Journal,	Austin, Tex.
Western School Journal,	Topeka, Kan.

EDUCATIONAL REVIEW

DECEMBER, 1895

I

COLLEGE ENTRANCE REQUIREMENTS IN HISTORY

On October 11 the New England Association of Colleges and Preparatory Schools, at its annual meeting in Providence, considered a new system of entrance requirements in history. After a long and breezy discussion it approved the plan by the decisive vote of 35 to 7, and recommended its adoption by the colleges. This is a practical outcome from the discussion of the last three or four years, and may be accepted as evidence that, in the minds of educators, history is a training study of importance, to which due respect is to be given by the preparatory schools. The resolutions thus adopted read as follows:

I. *Resolved*, That the colleges be requested to include in their requirements for admission a choice of subjects out of the following topics:[1]

(1) *The History of Greece*, to the death of Alexander, with especial reference to Greek life, literature, and art.
(2) *The History of Rome*: the Republic and the Empire to the accession of Commodus.
(3) *German History* } to be so taught as to elucidate the general movement of mediæval and modern history.
(4) *French History* }
(5) *English History*, with especial reference to social and political development.
(6) *American History*, with the elements of civil government.[2]

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[1] The Conference expects that for any one of the seven topics one year's work of at least three periods a week, or an equivalent, would be necessary.

[2] It is expected that the study of American History will be such as to show the development and origin of the institutions of our own country; that it will, therefore, include the colonial beginnings; and that it will deal with the period of discovery and early settlement sufficiently to show the relations of peoples on the American continent, and the meaning of the struggle for mastery.

(7) *A detailed study of a limited period*, pursued in an intensive manner.

—any two of these topics to constitute a required subject for entrance to college. The colleges are earnestly requested to accept any additional topic or topics from the list as additional preparation for entrance or for advanced standing.

II. *Resolved*, That satisfactory written work done in the secondary school, and certified by the teacher, should constitute a considerable part of the evidence of proficiency required by the college.

III. *Resolved*, That such written work should include some practice in at least three of the following:

(*a*) *Notes and digests* of the pupil's reading, outside the text-books.
(*b*) *Written recitations* requiring the use of judgment and the application of elementary principles.
(*c*) *Written parallels* between historical characters or periods.
(*d*) *Brief investigations* of topics limited in scope, prepared outside the classroom, and including some use of original material.
(*e*) *Historical maps* or charts, made from printed data and comparison of existing maps, and showing movements of exploration, migration, or conquest, territorial changes, or social phenomena.

IV. *Resolved*, That the examinations in history for entrance to college ought to be so framed as to require comparison and the use of judgment on the pupil's part, rather than the mere use of memory. The examinations should presuppose the use of good text-books, collateral reading, and practice in written work. Geographical knowledge should be tested by requiring the location of places and movements on an outline map.

In support of these resolutions the conference of five which prepared it submitted an elaborate report, which was printed in the *School Review* for October, and was distributed to members of the Association in a reprint. In this report the subject has been polished in all the facets which the size of the gem allows. To the members of the conference[3] the argument seemed conclusive and automatically convincing to any open mind. Perhaps it might not be safe to imitate those great divines who in their tremendous sermons against infidelity quoted the infidels' arguments, and thus for the first time suggested to the pious mind that there was anything to refute. The report assumes throughout that the ordinary methods of teaching history, at least in preparation for college, are not satisfactory; and the conference aims to suggest a simple and workable remedy, which shall not disturb existing conditions, nor compel uniformity either in teaching or in entrance requirements.

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[3] Professor Katharine Coman of Wellesley College; Miss Anna B. Thompson of Thayer Academy; Dr. Ray Greene Huling of the English High School, Cambridge; Mr. Edwin A. Start of Tufts College; Professor Albert Bushnell Hart of Harvard University.

Perhaps the purposes of the report, and the possibilities arising from its recommendation to the colleges, may be set forth best by briefly considering the fundamental principles upon which the report is based, by summarizing what it suggests as the duty of the schools; by presenting the corresponding duty of the colleges; and finally, by pointing out the serious inherent difficulties which beset any attempt to improve the entrance requirements in history.

Confidence in axioms often goes a long way, as in the case of Mr. Lewis Carroll's ingenious mathematical student, who knew without demonstration that "things that are greater than the same thing are greater than each other." Nobody who accepts this statement will require argument upon the following axioms as to historical teaching.

1. History is a scientific study, to be treated from a scientific standpoint.
2. History is a proper study for young minds.
3. The study of history requires to be spread over several years, in order to give the mind time to ripen upon it.
4. History teaching requires an apparatus of books, maps, and illustrative material.
5. History can be taught only by teachers acquainted with the subject.
6. History is a desirable study for secondary schools.
7. History should be a part of the preparation for college.

This mathematical groundwork is necessary because so much of the teaching of history is in flat contradiction to such modest assumptions. In many schools it is a memory subject, crowded into a year or a half year, without other materials than a text-book; and unwillingly taught by ignorant persons. What can the schools do to bring about the millennium? The conference lays down only two essentials: a minimum of two substantial years, "three exercises a week"; and plentiful written work. It further strongly urges three other reforms: study of history during four substantial years; Greek and Roman history for everybody; and one year of intensive study. As to details, it recommends freedom and variety, and a choice of historical subjects according to the opportunities of the schools.

Some objection has been raised to the minimum of two years, because the present requirements, even of the most exacting colleges, may be fulfilled in a scant one year. Nevertheless, at a time when the well-greaved Achaians are striving to drag the body of the Committee of Ten around the walls of the colleges, for profaning the sacredness of three years of preparatory Greek, some allowance may be made for history. Some schools now devote two years to the subject; others five periods a week during a single year. It cannot be said that the report proposes a great innovation. A maximum of four years' history is perhaps more novel, although it is now carried out by some favored schools, was strongly urged by the Madison Conference, and is imbedded in the programmes of the Committee of Ten. If the schools could make the whole four years' study count in the entrance schedules of the colleges, probably many of them would welcome the enlargement.

In the choice of subjects the resolutions printed above are conservative to the last degree; they certainly conserve everybody's pet topic in the list of seven allowable studies. Of course no one will for a moment suppose that any school will offer, or pupil will take, all the seven subjects. It will be noticed that "general history" is not admitted into the club of seven. Apparently the framers of the report consider general history, like general science, or comparative literature, or universal geography,—not a beginner's task; they prefer to get the advantage of the side-lights thrown by one country upon another, through the study of the more simple history of particular countries.

Though the conference was composed of one head master of an English High School and four teachers of modern history, it attaches special importance to ancient history, which forms a part of each of the model programmes of four years' history arranged to show how their scheme could be applied.

MODEL PROGRAMMES

Year	*Classical*	*Latin—Scientific*	*Modern Languages*	*English*
I	Greece (1).	Greece (1).	Greece (1).	Greece (1).
II	Rome (2).	Rome (2).	Rome (2).	Rome (2).
III	English (5), or French (4), or German (3).	English (5), or French (4), or German (3).	French (4), or German (3), or English (5), or American (6).	English (5), or American (6), or German (3), or French (4).
IV	Intensive study (subjects preferably from American History).	Intensive study (subjects preferably from American History), or French (4), or German (3).	Intensive study (subjects preferably from French and German History).	Intensive study (subjects preferably from English or American History), or American (6), or English (5), or German (3), or French (4).

For this emphasis no apology need be offered. Ancient history is not urged because it has long been a starveling adjunct to classics, nor because it is commonly accepted by colleges. The reasons for including it in any general programme would apply if Xenophon had been impaled by the Persians, and had consequently left the *Anabasis* unwritten; or if the colleges accepted only American history for entrance. In the history of the race the most significant and interesting parts—next to the growth of one's own country—are the stories of Judea, Greece, and Rome. To dissent from an Herbartian is to take your life in your hand; nevertheless the spirit of the resolutions is in flat contradiction to the dictum of Mr. McMurry; it does not "seek in our American history and literature as expressed in our mother English, the principal center and substance of culture for our common schools"; nor does it hold as "secondary and supplemental to these American materials . . . the choicest products of English and European history and literature." To say nothing of making the English Bible and Shakspere "secondary and supplemental" in any education of English-speaking folk, or of leaving the history of Christianity out of the "center and substance of culture," this is a principle of insufficient nutriment. Check the importation of Greek currants and Roman pearls, if you will; but surely we are not called upon to protect ourselves against Greek and Roman ideas. American children are entitled to the best choice of the most generous thoughts, the most lofty lives, and the most splendid courage in any country throughout the world's history. Ours are John Winthrop and Pontiac and Chickamauga; but no more ours than Marathon, just Aristides, stately Pompey, and Goth-fighting Belisarius. There is a splendid roll of American great men and great deeds. No character is more heroic than Lincoln's; but Pericles is a figure perhaps better calculated to fire a boy's heart than Benjamin Franklin; and Hannibal will be remembered by Americans longer than Winfield Scott. The thousand magnificent years of Greek and Roman civilization are not only the foundation of our modern culture, they abound in events that stir and thrill.

When the Madison Conference ventured to recommend a year's intensive study in a six or eight years' programme, it drew upon itself all the batteries likely to open against the similar propositions of the report at Providence. The attack takes the form of scoffing at "research" for school children. This is to apply a big term to a very guarded suggestion. Nobody proposes that children should imitate Parkman in his laborious comparison of manuscripts. "Research" which consists in trying to get at the bottom of a thing from a little collection of secondary material, backed up by the few printed records and contemporary writings available, cannot be dangerous, and ought to train the judgment. The object of the method is not at all to make historians, but to teach children to select the essential out of a mass; it is simply elementary laboratory work, in consonance with the most approved methods of experimental science.

It has been suggested that the conference recommendations as to written work in Resolutions II and III are like the old sailors' three wishes: "All the grog in the world. All the 'baccy in the world. A little more 'baccy." It may be observed, however, that the grog and 'baccy are not to be served out in the same watch. In the reformed course of two, three, or four good years, there will be time to introduce all these written exercises, every one of which is now being practiced successfully. The proposition requires no defense. Why are there themes? Why is there Greek and Latin composition? Why do people set original problems in algebra and geometry? Because that is the way to put pupils on their own feet. Written work nowhere excludes oral teaching; but it encourages reflex action; in history, it leads to accuracy and weighing of evidence, to literary expression and readiness to draw from the stores of one's own mind. Certainly the ordinary method of oral teaching sometimes leads to confusion. Perhaps practice in "written parallels between historical characters" might have been useful to the young gentleman who recorded for the instruction of the writer that "Two of the great men of Carthage were Hamilcar and Hannibal Hamlin."

If the schools need to be more insistent on history, the colleges have the corresponding duty of receiving it more kindly. To judge by their entrance requirements, they look on the subject as a poor relation of the classics. Out of a list of fifteen New England colleges and technical schools, eleven require Greek and Roman history; nine require or allow American history; five, English history; and one, mediæval and European history. With a single exception they all ask at least two of the seven "points" enumerated in Resolution I as suitable for preparation for college. The enforcement of these requirements is, to say the least, not strenuous. Of the results of the somewhat perfunctory examinations the writer is able to speak from having stupefied his brain with many hundreds of entrance-books. No college insists on map-drawing as a part of the test, or is successful (if it attempts it) in distinguishing rational and thorough teaching from cram. The certificate colleges certainly get no more than the examining. The present system has some effect—it is a kind of Discourager of Hesitancy to slow or ill-prepared pupils; but the test is only skin-deep. The schools which teach history well have no special advantage in meeting the college requirement, over those that neglect the subject.

This report opens up to the colleges two spheres of beneficent activity; they are asked to count well-taught history in any two or more of the seven fields; and they are asked to set such tests as will measure good work. Resolution I is only a statement of the present practice of some colleges; and tends to make allowance for schools which can better teach a considerable quantity of history than some other subjects. It aims, so far as history goes, to make every good high school a preparatory school. It is a stroke in the process of welding together secondary and higher education.

In Resolution II the colleges are incited to indicate a preference for good teaching, by insisting on written work. Is that a revolutionary principle? Are our brethren in English to claim a caveat on tests by writing? Are physicists alone to enjoy the admirable method of examining note-books? Are chemists to have a monopoly of laboratory work? The schools are anxious to teach all their subjects properly; but they ought not to be exposed to an influence which is satisfied with defective preparation.

Resolution IV requests that the colleges will also enforce good classroom work by examinations which require judgment. A few months ago the writer heard a typical question of the other sort: "Was Hannibal afraid that his communications might be cut off if he marched on Rome?" To which the only possible answer came: "Yes'm." Of course pupils complain of examination questions which cannot be answered from the memory, but lawyers and business men find a juster ground of complaint when they employ graduates of high schools who can remember but cannot combine.

What is now asked of the colleges is that they treat history as a substantial subject, by giving to it in their scheme the weight due to a subject pursued three times a week during two years—the weight given to entrance French or German, for instance. At present pupils are continually offered for the history requirement who have taken the whole range of Greek and Roman history in a half-year or even in a few weeks; and a few years ago a tutor began the subject with a boy at four o'clock on the afternoon before the Harvard examination, and got him in on the interim coaching. If the colleges are not willing to make the history requirement effectual, let them abandon it and do the work of elementary teaching themselves. That is an honest alternative; but it is not practicable, for the reasons that parents like to have their children study history; that many schools teach it, irrespective of college requirements; and that it is entirely possible to secure adequate instruction in schools.

However indisputable the need of an adjustment of this question of entrance history, however clear to the minds of the Association at Providence the remedy suggested by the resolutions, it is necessary frankly to face the fact that the questions involved are more serious than a programme, more complicated than a method, and deeper than a test. Better teaching in history is tangled up with the whole question of reform and adjustment of the secondary school programme; and there are special reasons why the remedy proposed depends for its final success on others than the schools or the colleges. The public at large must be convinced that history requires careful, troublesome, and expensive teaching.

Although not distinctly stated in the report, it is evident that the proposed requirements recognize the English high schools as competent to prepare for college, so far as history is concerned. If that be undesirable the New England Association of Colleges and Preparatory Schools has been an evil counselor, for in December, 1894, it adopted the following resolutions:

Resolved, That the interests of education would be promoted by a closer articulation than now exists between the secondary schools and the higher institutions of New England.

Resolved, That as an effective means of securing such closer articulation, the satisfactory completion of any one of the studies embodied in the programmes submitted on pages 46 and 47 of the Report of the Committee of Ten, to the extent and in the manner recommended by the Committee, should be allowed to count for admission to colleges and scientific schools.

Resolved, That the authorities of the colleges and scientific schools represented in this Association be, and they hereby are, requested to take such action as will give effect to the foregoing implied recommendation.

The vote of October 11 is therefore only a practical application of this doctrine to the concrete case of history. The colleges have an evident interest (of which they have apparently been unaware) in establishing even partial relations with the 2000 high schools and 700 academies where Greek is not taught. The thousands of pupils in these schools have also an interest in good teaching, which would be more likely if even a small number of them could eventually count it toward entrance to college. Certainly the scheme outlined in the resolutions is flexible, does not destroy existing conditions, and is widely applicable.

The principal objection brought against the report in the meeting at Providence was that it meant an increase in the total amount of requirements for college. The force of the objection cannot be denied. However, the increase is less than it might seem, for it is three exercises a week during two years, instead of four or five a week during one year. There is therefore not so much an increase of technical requirement as an illumination of mind as to what the requirement means. It is not good for colleges to have a dummy standard, nor for schools to claim as equal "points," English with three or four years' study, and history with a scamped eight months; or to allow two points for advanced Greek and Latin on one year's additional study and nothing for advanced history with two years' extra work.

Still it is a fair question, Where is the time to be found? In part, by the shoving back into the grammar school of some subjects now taught in the high schools—as physics, algebra, geometry, English composition, languages. In the English high schools there is room for three or four years' history in the gap left by the Greek; and on these schools the pressure of coming college examinations does not rest. In the regular preparatory schools the time must be found, because it is not worth while to teach history as a cram subject; it is therefore the duty of the colleges so to readjust their entrance programmes as to give proper place to history. In any event, the secondary schools are aware that they are expected to solve all the educational problems; all hands call upon them to accomplish more: the kindergartners on the gun deck; the grammar schools on the main deck; the colleges on the quarter-deck; the technical schools in the chains; the graduate schools on the topgallant yards—all look to the secondary teachers as the able seamen of educational reform. Of Greek, Latin, and mathematics it may be said, as Professor Shaler says of the required English at Harvard College: that they are "protected industries, and like all protected industries are constantly crying for more protection." Teachers of history and science have no interest in diluting education by leaving out classics; but they do claim for their unprotected industries as much consideration as though they could appeal to centuries of prescription. If the Greek and Latin and mathematical people insist that there is in the preparatory course no time for history actually taught, it will be like George Stephenson's prediction, if a cow came into conflict with his locomotive: "It will be varra awkard—for the coo." In the present and laudable temper of the American people history will be taught, since it is a college requirement; and it is to the interest of fitting schools to avail themselves of the educative power of the study; and it is equally to the interest of the colleges to throw that elementary work back where it belongs and where it goes in other countries.

Undeniably the training methods advocated in the resolutions are hardly twenty-five years old in American colleges, and are just beginning to percolate into schools. Charles Kendall Adams of Michigan University, Herbert B. Adams of Johns Hopkins, Henry Adams of Harvard, the lamented Professor Diman of Brown, were among the first to apply research even to the most advanced students. Parallel reading, systematic written work, weekly questions, careful notes, judgment-compelling examinations—these are by no means rooted methods even in colleges. But various other methods of great value are equally new. When did sight-translation begin either in college or school? Who first called for original demonstrations in geometry? Laboratory physics still seems abnormal to many good people. Yet who can doubt that these methods for developing individuality are permanent? Twenty-five years hence no good college or good school will know that there are less searching ways of studying history. If twenty years may be saved out of that quarter century, let us speed the plow.

Another difficulty, much more serious than novelty of method, must be squarely confronted. There is not at present a body of teachers trained to do this work. Why not? We have trained teachers of classics, mathematics, English, calisthenics. In a famous New England Academy a few years ago the history was, in part, shoveled upon a worthy director of physical training; but the authorities were aware that the teacher of Greek was not qualified to direct chest-weight exercises. Would any sane school board employ as a high-school teacher of Latin a person who had studied Latin only a year or two, and that only in school? Even in the poorest negro schools of the South they try to have teachers who can count forty. The colleges, both for men and women, are now turning out graduates who have had three or four years of thorough historical courses. It is even possible for teachers to learn something about their subjects after they enter on the work. It would be interesting to know how many high-school teachers of any subject are actually increasing their store of knowledge and methods, outside of school hours. Certainly, in this period of specialization, the suggestions of the report cannot be neglected simply because they expect teachers of history to know something of their subject.

Another serious question is how this quantity of written work is to be handled and corrected. The better the teacher, the more need for relief from the mechanical part of the calling. There seems to be only one way of taking care of a large crop of grain, and that is to have sufficient harvest hands. In experimental physics the study is impossible except in small classes; that means more skilled teachers. There is, however, no need for them all to be of the same degree of experience or ability; subordinate teachers may be used, and perhaps there is a fruitful system to be built up of young assistants, not yet prepared to take responsibility, yet relatively much more advanced than the pupils, and capable of managing the details of written work. From such assistants would develop some of the trained specialist teachers so much needed.

In the long run the success of the proposed scheme does not depend on schools or colleges or teachers—but on the public. Perhaps that despot does not yet understand that history can be taught only by good, highly educated, especially prepared teachers; the colleges have done nothing to convince him. There is nothing for which taxpayers so cheerfully expend money as the schools. The wealthy and generous city of Cambridge has spent $230,000 for an English high school building, and now seems disposed to lay out an equal sum on a Latin school; nevertheless it has so far been impossible to secure a thousand dollars for necessary accessions of books for the two schools. Yet books—more books, shelves of books, rooms of books, libraries of books—are the laboratory materials of history and literature. Unless the teachers are well prepared and numerous, history cannot be taught; unless they can have books, maps, atlases, and illustrative material, the best teachers are handicapped. What is more likely to lead people to give freely for such objects than the deliberate judgment of the colleges that history must be as well taught as Greek or English, and that the necessary teachers and material must be provided?

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II

THE REFORM OF COLLEGE ENTRANCE REQUIREMENTS[1]

The aims of this Association, as stated in its constitution, are to promote fellowship among teachers, to aid in bringing about uniformity in the requirements for admission to colleges and scientific schools, and to advance the standard of preparatory work. It is fair to say, I think, that the second of these purposes, that of securing uniformity in college requirements, was the efficient reason for its coming into being.

The Association has now been in existence for eight years, and has steadily grown in numbers and influence. The dominant purpose for which it was formed has never been lost sight of, and its labors have not been without result. Very wisely its efforts have been directed mainly toward specific cases. It seems now, however, that the time is approaching, indeed is at hand, for a more general movement along broader lines. There are many indications that this question of college requirements is to be prominent in educational discussions in the very near future. The famous report of the Committee of Ten, with its radical proposition that students completing any one of the courses therein recommended should be admitted to corresponding courses in college, has brought the whole topic prominently before the public. The success of the movement to secure uniformity of English requirements has led some keen observers to predict the possibility of carrying out a similar work in other branches, or even—mark the words—of securing substantial uniformity in all requirements for admission to college.

The time is ripe for a movement in this direction. In the last few years the schools and colleges have come to a better understanding and into closer relations than ever before. New England and the Middle States are learning that it is possible and wise to act in harmony, and the West, whose educational progress and standing we of the East do not fully realize, stands ready to unite in every forward movement. As I have said, the subject is in the air, and it is an open secret that several leading colleges have now under consideration radical revision of their entrance requirements. Under these circumstances it behooves us to be on the alert, and it has seemed to me that I could do nothing better or more timely on this occasion than to review as clearly and concisely as possible the present status of college entrance requirements, the chief objections that we make to the existing condition of affairs, and some of the plans that are proposed to remedy the evils.

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[1] Inaugural address as President of the Schoolmasters' Association of New York and Vicinity, delivered October 12, 1895.

Undoubtedly the colleges to which the schools represented in this Association send most of their pupils are Harvard, Yale, Princeton, and Columbia. These four colleges are not only among our oldest, largest, and most prominent, but they are among the few that do not admit students on certificate. For these reasons I propose to examine with some care their requirements and the method of administering them, with a view to ascertain, if possible, the reasons why preparatory schools are so loud in their complaints, and to suggest some remedies that may alleviate the evils.

Harvard names eight elementary and nine advanced subjects. The elementary subjects include English, Greek, Latin, German, French, history, mathematics, and physics. The advanced subjects represent additional work in the same lines. To be admitted a student must pass examinations in all the elementary studies and two advanced studies. Another advanced study may be substituted for elementary German or French; or two advanced studies, making four in all, may be substituted for either Greek or Latin. It will thus be seen that considerable latitude is allowed the candidate in his choice of subjects, but it should be noted that admission without

Greek is made decidedly more difficult than with that subject. Harvard is the only one of the four colleges that requires physics, and this requirement is not made easy. In Greek and Latin no specific authors or works are required. The examinations consist of translation at sight, with questions on forms and constructions.

Yale allows no choice. Certain books are named in Latin and Greek, and the candidate is also examined in translation at sight and prose composition. In mathematics the requirement is greater than the Harvard elementary subject. Only one modern language is required, and the English is the same. While the Yale examinations allow no option, a student well prepared for them should be ready for the Harvard examinations in every subject except the difficult one of physics. The reverse, however, is not true. A student prepared for Harvard is not necessarily ready for Yale, although the Harvard requirements are more severe than those of Yale.

The Princeton system combines points from Harvard and Yale, and differs from each. Like Yale it allows no alternative for Latin or Greek, but unlike Yale, it does allow some option in the specific works. For instance, in Latin a candidate may offer nine orations of Cicero, or six orations, and either selections from Ovid, or Sallust's *Catiline* or *Jugurtha*. In Greek he has his choice of Homer, Herodotus, or three additional books of the *Anabasis*. In mathematics, modern languages, and English, the requirements are substantially the same as at Yale, except that Princeton still examines in arithmetic. The peculiarity of the Princeton system is that it has a minimum and a maximum standard. For instance, in Latin, a student to be admitted must pass in grammar and composition, five books of Cæsar, six books of Vergil, and nine orations of Cicero, or equivalents. Five other subjects are named—Ovid, Sallust, Vergil's *Eclogues* and *Georgics*, sight translation, and Roman history. A candidate passing two of these subjects—one of which must be either the Ovid, Sallust, or Vergil—is admitted to advanced standing in Latin, and is placed in an advanced section of the freshman class. Similar arrangements are made in Greek, German, French, and mathematics. A student prepared for the Princeton minimum standard would lack Greek and Roman history, the *Eclogues* of Vergil and logarithms, to complete his preparation for Yale. A student prepared for Yale could take the minimum examinations at Princeton, but would not be ready for advanced standing in any subject.

The Columbia requirements, like those of Yale, are fixed, and allow no options, but are somewhat lighter, covering less ground in algebra, geometry, and Latin. Arithmetic, however, is included.

The more closely we examine the details, the more marked become the differences. For instance, Princeton and Columbia call for six books of the *Æneid;* Yale requires, in addition, the *Eclogues*. These do not count for maximum standing at Princeton, unless combined with the *Georgics*. The elementary algebra requirement at Harvard is less than is exacted of all students at Princeton and Yale; her advanced requirement is greater.

When we come to the scientific schools, the discrepancies are even greater. Princeton requires Latin of candidates for one course, but not for the others. Yale demands it of all, Columbia of none. Princeton names five books of Cæsar and four orations of Cicero; Yale four books of Cæsar and three books of Vergil. The Latin examinations at these two institutions also differ decidedly from each other in character. In mathematics the principal nominal difference is that Princeton does not require spherical geometry, while the other two do. There is a considerable difference, however, in the character of these examinations, particularly in trigonometry. Yale calls for botany, Columbia for physics and chemistry, Princeton for no science. Princeton and Columbia demand both German and French, while Yale is satisfied with either. On the other hand, while Princeton and Columbia demand only American history, Yale calls also for that of England.

If we were to enter upon a wider range of induction and include other colleges in our inquiry, we should find the same sort of differences existing throughout the country, but more marked in particular cases. These four colleges, however, are sufficient to prove the point that I am endeavoring to make—the unreasonable diversity that exists in their requirements. From the summary that I have made, it is quite clear, I think: first, that there is a considerable difference between these four colleges in the quantity of work required; second, that they do not agree in the details of their requirements. Speaking quantitatively, the Harvard requirements are greater than those of the other colleges by the addition of the subject of physics; and perhaps severity of administration in other branches may increase the difference somewhat. Still, the difference is not quite equivalent to a full year's work. A third or a half-year would be nearer the mark. Now I submit, as a proposition that needs no defense, that in order to secure efficiency in school work and economy in time, any material difference in quantity required by different colleges should amount approximately to a year's work. As long as pupils are prepared for different colleges in the same schools, and as long as colleges receive pupils only once a year, it is irrational to have the requirements of one heavier than those of another by a half-year's work.

In the second place, it is extremely annoying, to use a mild term, to be compelled to vary a student's course according to the college which he is to enter. To be sure, a strong, well-equipped school, able to dictate to its pupils and patrons, can frame a classical course broad enough to cover the requirements of these four colleges, but it is done at too great a cost. For our Princeton boys we must include a review of arithmetic and carry algebra farther than is required by Harvard or Columbia; for Yale we must read the *Bucolics* and study logarithms and their application to geometrical problems, in addition to certain topics in algebra not called for by the others; for Harvard we must supply a thorough course in physics. That is a large load to pile on a heavily burdened animal. Our preparatory courses are already strained. The colleges complain that our pupils are not well enough prepared. They also complain that we keep them too long; that they are too old when they leave our hands. Why, then, in the name of common sense, do they add to our burdens by each one calling for its own particular little fad? And yet the state of affairs in the classical requirements does not begin to compare with the "confusion worse confounded" that exists in the approach to the scientific schools. I have already spoken of some of the points of difference. Look again, for a moment, at the requirements in science. Harvard puts on a stiff requirement in physics; Columbia, lighter ones in physics and chemistry; Yale calls for botany; Cornell for physiology. Consider the case of an ordinary school compelled to prepare students in those four subjects, bearing in mind that, as they are to face examinations, the work must be done in the last two years.

Of course, we can do it; but we must sometimes spread our butter very thin. At the present time, physics is the science most generally called for by the colleges, and therefore most emphasized by the schools. Under these circumstances, just so long as certain colleges choose to call for botany, chemistry, or physiology, just so long will they fail to get the best work that the schools are capable of, and just so long will they retard the development of science-teaching in this country.

Give us one science—be it physics or botany, chemistry or physiology—and we shall be able to make it an educational factor of steadily increasing efficiency; but if we are compelled to divide our energies and our attention among four or five subjects all will suffer, and we shall be in danger of drifting perilously near to the standard of the old-fashioned girls' finishing school with its curriculum embracing every known "ology." Yale officially said to this Association, when we protested against botany as a requirement, that it considered botany a better school subject than physics. We do not at this time dispute the truth of that statement. What we do say is that, if we have to prepare students for one college in physics and for another in botany, we shall do poorer work in both subjects than if we could concentrate our time and energies on either.

What is true of science is equally true of other subjects. It is the universal testimony of schoolmasters that we can do better work in any branch if we have a uniform requirement—even though that requirement is faulty—than if we have varying requirements, each one perfect in its way. I do not, at this time, make the demand that all colleges should require the same subjects for admission. There may be good and valid reasons why one should insist on Greek and another should allow an alternative for that language. What I do insist upon, however, and what I call upon this Association to fight for until it obtains it, is that the standard in each subject shall be the same in every college that requires that subject. In any subject required for college—Latin, algebra, science, or French—the same course should prepare pupils equally well for all colleges requiring that subject. We make this demand not because it will lighten our labors and save us annoyance. We urge it because we know from our experience that it will make possible better work in the preparatory schools, and will tend to raise the standard of secondary education. I assert, and am prepared to maintain the truth of the assertion, that the establishment by any college of a requirement not in harmony with those prevailing in other colleges, is a direct blow at the cause of sound education. And I further assert that no college founded for the advancement of sound learning and devoted to the furtherance of education has any moral right to hamper the work of secondary education by thus laying down an arbitrary individual requirement.

This, then, is the first great charge that we make against college requirements as they now are—the lack of uniformity. So far, I have confined myself to the requirements as stated in the college catalogues. When we come to consider them as we find them in practice, we discover other causes of complaint. These I shall speak of more briefly.

In the first place these requirements are varied in practice according to the personal idiosyncrasies of the individual examiner. There are some men, quite possibly scholars and good teachers, who seem to think that the sole object of an entrance examination is not to test the fitness of the candidate to go on with college work, but to uphold certain theories or to emphasize certain points that seem to them important. I have been told by a college professor, when I objected to a certain question, that he put it there simply to call the attention of preparatory schools to that point. We have all of us seen entire papers that were apparently constructed on the same basis. It has come to be one of the tricks of the trade to study these peculiarities, and to coach boys up on them before the examinations. Such a state of affairs, wherever it exists—and it does exist—must be demoralizing to the teacher and destructive of good teaching.

Again, some examiners seem to think that the object of an examination is to entrap the unwary. It would seem as if the day for catch questions and catch problems had gone by, and yet every year it is possible to cull a choice assortment from the various college papers.

The individual element is also clearly shown by the entire absence of any uniform standard of thoroughness or difficulty. A subject will be most rigorously treated at one college, and most indulgently at another. In the same college the examination in one subject will be most justly regarded as a "terror," and that in another as a "perfect snap." In other words the only standard appears to be the judgment of the individual examiner, and when that examiner is a youthful tutor of much freshness of learning and little knowledge of teaching, or when he is, as some college professors appear to be, entirely lacking in appreciation of what may be reasonably expected from boys entering college, or when he is a man of fads and sees fit to air those fads in his entrance papers—then the result is likely to be anything but what it should be.

The second great objection, then, to college entrance requirements as they now are, is that there is no uniform standard of enforcement. Secondary work is too largely conditioned by college requirements for these to be left to individual judgment and caprice as they now are in too many cases.

In the third place very grave distrust exists as to the accuracy and justice with which the entrance examination papers are judged. I make no charges of carelessness or unfairness, but there are certain facts that cannot be denied. The first of these facts is that the results of the examinations are often a tremendous surprise both to the pupil and to his teacher. Our good scholars are sometimes conditioned and our weaklings passed. The "lottery of entrance examinations" is a phrase not infrequently heard. The second fact is that in certain instances where individual cases have been investigated, inexcusable blunders and errors of judgment have been discovered. In one case, for instance, that came under my own observation, where a boy was conditioned in Latin composition, the examiner, on re-reading the paper, frankly admitted that, owing simply to haste, he had made a clear mistake, and reversed his previous decision. In more than one case where examiners have, on request, given the reasons why pupils have failed to pass, these reasons appear to schoolmasters extremely peculiar. We all of us have stock stories to illustrate this point.

These facts have caused a general and widespread distrust of college examinations. I said that I did not make charges of carelessness or unfairness. Such charges would be serious matters and would be difficult, if not impossible, of proof. We recognize the great difficulty of passing accurately, fairly, and promptly upon the papers of several hundred candidates. We know the earnestness with which this troublesome problem is faced in many instances, and we are disposed to be lenient, but having these facts before us, we cannot too strongly urge upon the colleges the absolute necessity of providing facilities to pass accurately and justly on all papers submitted, and of so ordering their arrangements as to secure the confidence of the preparatory schools and to provide easy means of investigation and redress in cases of apparent injustice.

The fourth objection that we have to make is perhaps the most fundamental. It is that, with some notable exceptions, the examinations attempt too much. They try, in the space of two or three hours, to test the extent and thoroughness of work that has occupied from two to five years. Every teacher knows the difficulty of framing an examination that shall be an adequate test of a single term's work done under his own supervision. When that term is extended to several years, and when the work has been done under others, the task of preparing such an examination comes dangerously near to the impossible.

And yet many of the entrance examinations are direct attempts to accomplish this difficult feat. They are framed with the set purpose to test the work in detail. I saw this summer the certificate issued by a certain college to a boy who tried his examinations in June. He was marked as passed in "algebra, except progressions; German, except verbs; and Cæsar, Books 2 and 5." Another boy was certified by the same college as having passed in "algebra, except quadratics with two unknown quantities; and Cæsar, Book 4." In other words the college officially certified that the work of those boys had not been uniformly thorough and satisfactory during the last few years, and assumed that it was able to indicate the specific points of deficiency. In the space of two hours, without ever having seen the boys before, it was able to determine that both had done satisfactory work in algebra extending over say two years, except that one had slighted progressions, and the other did not thoroughly understand quadratics with two unknown quantities. An examination lasting one hour was sufficient to determine just which books of Cæsar those boys had mastered and just which they had slighted. Verily such knowledge is too wonderful for us. It is high, we cannot attain unto it. And yet this extreme case, absurd as it is, is only the logical outcome of the policy adopted in many instances.

The ideal entrance examination will attempt to discover not so much what the candidate has done as what he can do. This is a very difficult thing, especially under the conditions that prevail at the entrance examinations, but the nearer this standard can be approached the more rational will be the test.

This fault of attempting too much, of trying to test the details of a student's work, is fundamental. Unless it is eradicated the whole system of entrance examinations must fail to secure proper results. It is this that compels us to bear the entrance examinations so constantly in mind in our work, and sometimes forces us to think more of fitting for an examination than of teaching the subject. I believe that it is largely because of this defect that so much fault is justly found with the present system.

These, then, are the charges that we have to bring against the present requirements for admission to our colleges—first, the lack of uniformity; second, the varying standard of enforcement; third, the uncertainty and inaccuracy of administration; fourth, the specific and detailed character of many of the examinations.

These are serious charges, and there can be no question that the work of secondary education is decidedly hampered by the defects that I have mentioned. Now for the remedy. What practicable plan can be proposed that will remove the cause of our trouble?

Of course, the first suggestion that presents itself is the doing away entirely with entrance examinations and the substituting of admission by certificate. This would certainly meet most of the objections, but, on the other hand, it is claimed that it would introduce new troubles. On this occasion I propose, for several reasons, to remain absolutely neutral and not to commit myself on either side of the vexed certificate question. At the next meeting of the Association an attempt will be made to see if there is any approach to unanimity among the members on the subject. In the meantime the question before us is, "Is it possible so to modify the existing system of requirements as to remove, in large measure, the objections that have been urged?" I believe that it is, and have to propose certain measures looking toward that end.

FIRST: Every candidate should be required, before entering an examination, to submit a certificate from his principal instructor stating what work he has done in each subject and approximately what has been the quality of the work. That is, the certificate would give the teacher's opinion of the success with which the pupil had accomplished his school work.

SECOND: The examinations should then be made general rather than specific. With the certificate showing what the candidate had done in each subject, there would be no need to test the details of past work. If it were known that a certain amount of work had been done in any subject, the only object of an examination would be to determine in some degree the thoroughness and understanding with which it had been done. This it is possible for an examination to do. And this would rob the examinations of much of their terror for pupils and teachers.

THIRD: The decision as to the admission of a candidate should then be made by the college, basing the judgment on the evidence afforded by both the certificate and the examination. This would throw the responsibility of the decision upon the college, but it would give the college a sound basis for decision, which is not afforded by the present system of examinations. Our schools and colleges have found the system of promotion from class to class on the basis of an examination alone to be unsatisfactory. So also has the system of promotion from school to college on the same basis been found eminently unsatisfactory. Generally it has been found best to judge of a student's grade, or of his fitness for promotion, by combining the record of his daily work through the term with that of an examination at the close. The one supplements the other, and the two combined afford a fair basis for judgment. I know of no reason why the same system should not be applied with equal success to determine the fitness of a pupil to pass from a preparatory school to a college.

FOURTH: As long as the college maintains examinations, it should provide for administering them accurately, fairly, and wisely. The preparation of the papers should be in the hands of capable men, under such supervision and so restricted that the absurd travesties now sometimes inflicted upon us would be impossible. A sufficient force of competent men should be provided to pass upon the examinations promptly and justly. The final decision should be placed in such hands that we could feel confidence that the fate of our pupils was determined by men of experience and sound judgment, not, as we know to be sometimes the case, by inexperienced, untried tutors. Definite arrangements should be made by which any schoolmaster could obtain at least a statement of the grounds upon which a candidate recommended by him was rejected or conditioned.

Of course, all this means increased labor and expense for the college. We recognize that fact, but we insist that if a college undertakes so serious a task as passing upon the qualifications for admission of candidates, it is morally bound to provide facilities for doing that work thoroughly and well. No considerations of convenience or economy can free it from this obligation.

FIFTH: The requirements of the various colleges should be uniform. As I have already said, I do not argue that the same subjects should necessarily be required at all colleges, although, unless a choice of subjects is allowed the candidate, I hold this to be extremely desirable. I do insist, however, that the standard in any subject should be the same in every college requiring that subject. I see no objection to dividing a subject into two parts—elementary and advanced, but I hold that elementary Greek and elementary Latin should mean the same thing at Harvard, Yale, Columbia, and Princeton. One course in science, mathematics, English, French, or history should prepare students equally well for every college naming those subjects in its list of requirements. This is the most pressing, the most needed reform, and it is the one to the securing of which we should turn our best energies at the present time.

I have made five suggestions, the carrying out of which would, I am confident, materially relieve, if not practically do away with the evils of which we complain. Is there any possibility of securing their adoption, and can we as an association, or as individual schoolmasters, do anything to hasten the desired result? I believe that we can; and, moreover, I believe that the time is now ripe for vigorous, united action. The subject is in the air. Many of the colleges are already beginning to bestir themselves and preparing to do something, even though that something is very vague. This is the time when vigorous concerted action will produce definite results.

The first thing that is in our power is agitation. There are many men in the college faculties who are thoroughly awake to the situation, and well in touch with the secondary schools. There are more who have, by force of circumstances, been shut off from intercourse with secondary teachers, and who do not really know what we desire and ask for. Some of them honestly think that we are entirely satisfied with things as they are. A few, very few fortunately, seem to regard a suggestion from a schoolmaster in the light of an impertinence. During the last two years it has been my fortune to have a considerable amount of correspondence and conference with college professors in regard to entrance requirements, particularly in the subject of English. Two things have impressed me strongly. The first was the readiness and even eagerness of these men to learn the needs of the schools, and the earnest desire on their part to do what they could to help us in our work. The second was their great ignorance of the conditions of our work and of our needs. The success of the recent movement to secure uniformity in English requirements was largely due to the fact that for the first time the true position of affairs was squarely placed before the college authorities. The systematic and persistent efforts in that direction made by individual members of the English Conference were not mentioned in the official report, but they were none the less effective. When once the situation was clearly recognized, there was an immediate and cordial response. Now, if these things are so, it is our duty and it is our privilege to do all that is in our power to dispel this ignorance. It behooves us as individuals and as an association, by all means at our disposal—by formal resolution and by action of our conference committee, by letter and by print, by private conversation and by public speech—to force upon the college authorities the knowledge of our needs.

The first effective instrument in our hands is agitation. The second is legislation. Two plans have been proposed. The one involves a central commission, not unlike the Committee of Ten, whose duty it shall be to investigate the whole subject of entrance requirements and to propose a scheme for their unification. Such a plan was resolved upon at the last meeting of the National Educational Association. This committee will have before it a magnificent opportunity, and its composition and its work will be watched with the keenest interest by every preparatory teacher in the land.

The other plan proposes a separate committee for each subject, made up, like the English Conference and like the various conferences under the Committee of Ten, of experts in that line, representing the various parts of the country and the different classes of higher and secondary institutions. Each committee would be expected to do a work like that done by the English Conference. These two plans are not mutually exclusive. A central committee may even be essential to co-ordinate the reports of the special committees. If the committee of the National Educational Association undertakes the task of organizing such sub-committees, then the work should be left in its hands without interference. If, however, this committee limits its work to its own investigations, then the appointment of special commissions should at once be taken up by the various associations of colleges and preparatory schools now existing. Such a work need not antagonize or neutralize in the slightest degree the work of the central committee. Each would help the other.

It is the first step that counts. A long step forward has been taken in the department of English, and there is no valid reason why, in the coming year, a similar step should not be taken in some other department. The essential thing to secure this is a distinct and united demand on the part of the schoolmasters. Agitation will compel legislation, and through agitation and legislation we shall attain the desired end.

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III

A HIGH-SCHOOL COURSE IN ENGLISH LITERATURE AND ITS CORRELATIONS

The correlation of studies is more completely attainable, fortunately, in the most important years of the child's education, namely, the earlier years; for at that period the entire body of instruction comes from one teacher. If this teacher be a liberally educated and professionally trained person (conditions hardly ever obtained, with us) the unification and enrichment of the child's store of knowledge and *nexus* of habits may go on in strong and symmetrical development. But in high schools, where the departmental system is in operation, the problem of unifying the body of instruction is not an easy one. Complete unification is not in the power of any one teacher, and in the interest of the pupils the rigid lines of departments should be broken down somewhat, a healthy circulation and co-operation should be brought about. To this end the following suggestions may be of use: (1) Not only should each teacher, when it is practicable, have his work divided between two related branches, but each should, occasionally, exchange classes with teachers even of somewhat unrelated departments, or at least should visit these other classes. (2) Reports from each department, stating the work going on, should be insisted upon: these reports to be given in stated conferences or teachers' meetings, with proper detail, and the substance of them to be noted by the other teachers concerned. In this way each teacher would be informed respecting the current work of his pupils, in all fields, and would be in a position to suggest many interesting and useful correlations. Too often it is the case that an English or a Latin teacher has no idea, but the vaguest, of what his pupils are doing in history or science. Owing to this lack of co-operation many important illustrations and appeals to interest, which might be employed with the greatest advantage to all concerned, are lost. When the departmental system is allowed to run to seed, the points in the various studies are slightly correlated, half understood, soon forgotten. (3) But perhaps above both these suggestions in importance, is the principle that each teacher should acquaint himself with the methods of conducting his own class work in the light of its correlations. This paper is an attempt to consider what should be done in this way with that study which is the highest of all, in inherent educational value, and at the same time the richest and most instructive in its correlations, namely, English. I intend (I) to consider the scope of the high-school curriculum in English literature, and upon this foundation (II) to discuss the various correlations that seem to be of greatest practical consequence, either for increasing interest and strengthening memory, or for broadening and unifying the pupil's knowledge.

I. The English curriculum includes two parallel or simultaneous studies, viz., composition, and the literatures of America and England. With the former, important as it is, the present paper is not to deal. It should be noted, however, that the principle of unification requires that these two sides of the English work should be mutually dependent; and without doubt practice proves that composition work is more interesting and more efficient when based directly upon the literature studied, rather than upon text-books of rhetoric and haphazard themes. The rhetorical excellences, clearness of thought and plan, lucidity and energy of expression, are to be gained no way so well as from the study and the imitation of acknowledged literary models. Therefore composition and literature study co-operate. The curriculum should link them closely together, step by step. Taken thus together, the English branches do more than any other high-school subjects for developing powers of thought and expression, and for cultivating the æsthetic and moral nature. In its helpful relations to the rest of the body of instruction, and in its relation to enjoyment and usefulness in life, English is not merely indispensable, but of first consequence, to every pupil.

But, to turn to the literature alone, it must be admitted, I think, that the English curricula of many of our high schools are regrettably lacking in plan or development. Both the choice and the arrangement of the works to be read seem in many cases merely arbitrary. Thus we shall find Irving's *Tales of a traveler* immediately followed by Defoe's *Journal of the plague*, and the only remaining literary work of the year will be the study of one of Shakspere's plays. Even in the fourth year of a high-school course Irving's *Sketchbook* may divide the whole year's time with Milton's lyrics. Such actual instances as these indicate no separation of American from English authors, and show no adherence either to historical development or to a progressive difficulty in the selections read. College requirements are so reasonable that most schools can exceed them, and all can, by the exercise of a fair amount of foresight, plan the English work on some definite line. Nor can it well be contended that the question of plan is of no consequence. It is true that the teacher should aim primarily to develop, through an interested familiarity with both the substance and the form of great works of literature, an appreciation of them, and a desire to become receptive to more. It is true that the study of literature is no longer recognized as meaning a memorizing of dates and dry facts. Yet the giving of this all-important appreciation seems to depend almost wholly upon the spirit of the teacher, which is contagious. Well-chosen correlations may also do something, by increasing the pupil's understanding of the works read, and by broadening his intellectual outlook—a most important factor. But, after all, the secondary aims of the study are worth considering. A certain amount of knowledge of literary history is undeniably desirable; nay, since it is even necessary to the true knowledge of any work, it contributes in its way to the gaining of the main end, the growth of the pupil's nature through appreciation. From this point of view a well-considered plan becomes a necessity.

There are, I take it, three possible good modes of pursuing the study of literature. The first would, if difficulties of language could be overcome, be the best, viz., to follow the various literatures as they flow side by side down the stream of historical development. The parallel courses of the English, French, Italian, Spanish, and German literatures could then be traced, epoch by epoch, in all their various wealth, their inter-dependencies and cross-influences, their respective eras of glory and relapse. Such simultaneous or correlated study of the several literatures is, however, out of the question except for advanced classes in colleges, owing to the great obstacle offered in the necessity of knowing the past and present forms of so many languages. Translations might, it is true, in part remove this obstacle, but not without a very considerable loss of flavor and interest. Accordingly the full and organized knowledge of our western literatures must be gained in some more irregular and approximative way than by the comparative method. We are obliged to begin by studying each one more or less separately. Now, two plans for studying a single literature, as the English, can be proposed: one is that which takes up the literature by sections or epochs, considering as fully as may be the various phases of one period before advancing to the next. This is the usual method; we may style it the block method. There is also the line method, which follows in historical development, first, one phase or form of literature from origin to end, then another. Thus the development of fiction, or the changing qualities of lyric poetry, or the history of the drama, might be treated one after the other, each in its complete chronological evolution. This method would seem calculated to give the learner a good comprehension of literary developments, a true perspective of writers and epochs, and by consequence a sound characterization of present phases of literature. Possible confusion could be obviated by the teacher's bringing out co-ordinations between and among contemporary writers, and between the literature and the national history. In the Washington high school this method has been used most satisfactorily, for three or four years, with classes of the most advanced grade, which had already covered in the usual fashion the general field of English literature. Though this experiment in fourth-year classes (whose lines of work will be briefly described later) has proved very successful,—interest being strong and the outlook broadened,—yet I am not prepared at present to advocate the adoption of this method in first-year classes. The pupils who now enter our high schools are so immature, so deficient in literary sense, that the line method seems hardly adapted to them. To get the best results from it, a somewhat broad foundation would seem a requisite. Further experiment may prove, however, that the method is entirely feasible even in first-year classes.

But if the judgment against it be sound, we are obliged to resort to the epochal or block method. This is, of course, the method of the old text-book system of teaching the history of literature—to take up period after period, or group after group. When, however, we come to dispense with the text-book about literature, and attempt to teach from the literature itself, the various groups, as such, are apt to receive but secondary attention, and we find ourselves, in effect, teaching the literature author by author. By this plan the pupils are apt to obtain but a very incomplete knowledge of the literature as a whole. With them, the comparatively few authors who happen to have been chosen stand for all literature. This fact, so easily exaggerated, is not to be ignored. We should recognize that if we are to teach literature by the block method, or, as is more usual, by its outgrowth, the author-at-a-time method, we must somehow see that the pupils (1) correlate each author with his important contemporaries and their work, and (2) recognize the historical continuity of the literature, from one period to another. These not unimportant ends can be attained by the use of contrasts and comparisons, and by a judicious admixture of the longitudinal method of study, in the form of investigations by pupils (here is where a text-book may be useful), and in suggestive questionings, blackboard correlations, and reviews. Yet the caution should be made, that the literary history should not crowd out the literature itself. It is from the form and substance of the masterpieces studied that the chief intellectual, æsthetic, and moral benefits are to come, and the teacher must subordinate all else to the right handling of them.

Adopting the block method, as above described, we must settle one further point before deciding upon a curriculum: Shall we attempt to follow the order of history, or shall we reverse that order and work backward? Shall we begin, let us not say with Chaucer, but with Shakspere, Bacon, or Spenser, and end with Tennyson, or shall we begin with the writers of the present day? It will be admitted that it is undesirable that the true order of history should be deviated from, yet would it be practicable to have such first-year high-school pupils as we now deal with, begin the study of English literature amid the difficulties offered by the partially obsolete language and sentence-structure, and by the involved or highly poetic thought, of our early masters? Works prematurely read are apt to repel and disgust the unable mind. We must not forget, either, that the study of literature does not and should not begin in the high school; and these difficulties are yet greater with younger pupils. It seems clear that the reverse order is the best practicable: it proceeds from the more familiar (in language and probably in matter) to the less familiar, and it admits, after all, of the pupil's gaining a clear and adequate idea of the historical development, since the order of history is indeed followed, only in retrogression.

The above considerations also suggest that American literature should be taken up first. The work of most of our authors can, as it happens, be fairly represented by sufficiently easy pieces of reading; and in the case of our native literature the direct historical order can be followed with advantage, at least, if we do not, in our choice of special authors for study, go back of Franklin. It seems to me that the least that can well be expected of the grades below the high school is, that they dispose fairly of the American literature, so far as school-work can dispose of it. Some few of our greatest writers, like Emerson, Thoreau, Lowell, and Whitman, must be left in any event for mature reading—cannot be at all adequately dealt with even in our high schools. Whether under an ideal system the grammar school could advantageously enter upon the systematic study of the English literature also, we need not here consider. I am inclined to doubt it. At any rate, the teacher of English in the high school would have good reason to be satisfied, if the pupils he received were generally well prepared to begin an intelligent study of the mother literature—not only being acquainted with the American outgrowth, but also having a fair share of general information respecting natural history, grammatical principles, and, if possible, the outlines of the stories of the great nations.

Therefore, though at present we are, as a rule, under the necessity of working in American literature to some extent in our high schools, I shall in the remainder of this paper refer only to work based upon English writers. This partiality is, I think, not to be objected to, for the advisable amount, as well as the method, of correlation with other branches of study can be seen as well from one series of works as another. The main part of the high-school literature curriculum is, moreover, in point of fact, concerned with English authors; and the correlations in the study of the *The house of the seven gables*, or of *Evangeline*, or of the *Sketchbook*, can readily be planned and developed by a teacher who understands how to deal with *A tale of two cities*, or *Elaine*, or the *Spectator* papers.

I propose to consider in the light of correlation part of the following literature curriculum, which I take to be not too extensive for the average high school. The works selected can, of course, be replaced, from year to year, by others of a similar character or chronological position, according to changing college requirements or other conditions. If the course seem somewhat restricted as to the number of the selections for special study, it must be remembered that the English work includes composition in close correlation with the literature, and this necessarily requires much time and attention; furthermore, the study of each selection must be, as I have said above, supplemented by some work with contemporary and with related literature, coming both before and after. In other words, each selection is a nucleus for the study of an author's works, a group of his contemporaries, and even the whole epoch.

First year: 1. Tennyson's *Elaine;* 2. Dickens' *Tale of two cities;* 3. Macaulay's *Essay on Warren Hastings;* 4. Coleridge's *Ancient mariner;* 5. Goldsmith's *She stoops to conquer.*

Second year:[1] 6. Addison's *Sir Roger de Coverley* papers; 7. Milton's *L'Allegro* and *Il Penseroso;* 8. Shakspere's *Merchant of Venice.*

Third year: 9. Shakspere's *Hamlet;* 10. *Macbeth;* 11. Bacon's *Essays;* 12. Chaucer's *Prologue* and *Nonne prestes tale.*

Fourth year: (*a*) The English essayists, in order of time, specially (with review of Bacon and Addison) reading of Milton's *Areopagitica*, Lamb's *Essays of Elia*, and Carlyle's *Essay on Burns* (or *on Scott*); (*b*) a historical study of the novel, beginning, for introduction, as far back as the works of fiction of Greece and Rome, and coming down through the age of mediæval romance to the evolution of the modern novel: class reading and analysis of *Silas Marner* and other works; (*c*) the poets of the present century, especially Browning. A review of prior study of literature may be substituted for this.[2]

The utmost economy of class time is necessary to the proper working out of this course. With an allowance, however, of three hours a week in the first year, two in the second, and four in the third and fourth, I have several times covered this, or an equivalent curriculum, without undue haste. (This is less time than the Committee of Ten programmes assign to English, even in the classical course). Yet the composition work and the collateral literature must be attended to, within these time limits. The necessity for care of the minutes must still more increase when the teacher attempts to go into even the more obvious correlations of the readings. The difficulty must continually be to resist temptations to digression and to disproportionate emphasis of this or that element in the English work—a tendency against which the teacher must guard not only by training his judgment as to what is of real consequence in the class-work, but by careful planning in advance of the exercises.

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[1] A considerable time here being given to argumentative composition, but slightly connected with the literature-work, the latter is somewhat curtailed.

[2] The fourth-year work here given is that which my own classes formerly followed. I do not propose it for general adoption. Various circumstances may determine the extent and character of fourth-year English.

II. I propose to consider the correlations of English literature study under the five heads of the following table of possible correlations. (The table would be equally serviceable for any other than the English teacher, if English literature be introduced in its appropriate place.)

1. HISTORY OF NATIONS (history of special developments may be considered under II, III, IV, and V).

a. Ancient, *b.* Mediæval, *c.* Modern (English, French, Imperial, etc.). Political geography may advantageously be regarded as an adjunct to history.

2. LANGUAGES AND LITERATURES.

(*a*) Oriental (Hindoo, Chinese, Persian, etc.).

(*b*) Ancient (Greek, Latin); languages, mythologies, literatures.

(*c*) Mediæval and modern: languages, folklores, popular ballads, literatures: (1) French, Spanish, Italian, (2) Scandinavian, German.

3. SCIENCES.

(*a*) Physics and chemistry (incidentally mathematics here and elsewhere).

(*b*) Astronomy, geology, physical geography.

(*c*) Biology (botany and zoölogy), psychology.

(*d*) Sociology (economics, law, ethics; politics or civics, historical and practical).

(*e*) Logic (inductive, deductive, formal, rhetorical).

4. ART.

(*a*) Function, (*b*) history, (*c*) criticism or taste, (*d*) practice.

5. PHILOSOPHY.

(*a*) Cosmology, (*b*) fruit of the sciences, (*c*) art of living.

Now if, with this table before us for suggestion, we should attempt to consider seriatim the possible, or even the interesting and desirable, correlations of each of the twelve works selected for the first three years' readings, we should have before us an immense task, with the promise of confusion in our results. In practice it will be found that each selection suggests its own most obvious, or perhaps, necessary, fields of correlation; and usually a good many more than it is really advisable to use will occur after some reflection. I propose in the case of only the first two or three selections to go much into detail. Brief treatment will suffice for the rest, for the real difficulty is that of wise selection from amid an embarrassment of riches.

1. Tennyson's lovely poem of *Elaine* opens to the pupil's mind and heart the wondrous realm of chivalry, with all that it includes of feudal knighthood's feats of arms in field or tourney, and all of the romantic and idealized spirit of an age so different from our own. Against such a background does the poet weave in with exquisite skill the pathetic and beautiful story of "the lily maid," whose song, because of others' sin, was made a song of "love and death." For the appreciation of the setting of this and of the other *Idylls of the king*, the reader should picture to himself the appearance of the land, the court life, the social conditions of the time. Who was Arthur, what sort of a people did he rule, how did they come to be Christian, who were "the heathen" against whom Arthur so nobly and so vainly struggled? An outline map of England put upon the board may be filled in with places and natural features mentioned in the poems. Various pupils may make special reports on the ceremony of knighting, on the armor of a warrior, on the weapons, the conduct of a tournament, the dress of the time. Arthur's throne was carved with dragons and overhung with a splendid canopy. Is it possible that fine carving and weaving could have been cultivated by this people? What can the poet mean by speaking of Camelot as "the dim rich city"? Were the houses, outside and inside, like ours? The meaning of the lapse of time implied by fifteen centuries must be made somewhat vivid. It should be suggested to the pupils that to know of Tennyson's sources for his idyls means

to trace a long and interesting line in English and French literature. The poet throws over his work a subtle air of antiquity by the use of certain obsolete words. Whence are they taken, and whence come our other and ordinary words? (A large question, to be answered at first only in outline.) How do such stories originate, as those strange accounts of Arthur's birth, or of the hand "clothed in white samite, mystic, wonderful," that gave and retook Excalibur? It may be worth while (glancing at the sociological element in the history) to query a little as to the industrial life of a people under primitive kingship, and under the feudal system. How did all these knights and ladies get their daily bread and their gorgeous trappings? Finally, let the analysis and contrasting of the various characters in the poems suggest their lessons. The whole epic of Arthur, his mighty plan of the Table Round, and its insidious defeat and destruction, spite of the "blameless king's" nobility of soul, must be a silent teacher of sympathy and of purity of aim.

I shall not hereafter consider it necessary to remind the reader of these two points: (1) there should be in each case some attention paid to the other works of the author chosen to the life of the author, and to his place in literature, among certain emphasized contemporaries; (2) abundant composition-exercises connected with the reading or with phases of the collateral study, such as are indicated above, must serve both in the proper handling of the literature-work and for developing the power of expression itself.

2. Perhaps a very available work for continuing the line of history already opened up would be one of Scott's great novels, say *Ivanhoe* or *The abbot*. But, aside from the fact that Sir Walter would break our chronological sequence of chosen authors, the historical setting of a mediæval romance would have lost some of its novelty for the pupil who had been already introduced to feudalism and chivalry in *Elaine*. Dickens's *Tale of two cities* deals with one of the most dramatic epochs of history, one of the most important, too, in its bearings on modern notions. The gigantic outbreak of the French Revolution was the consequence of the abuse of the time-

honored feudal system, which had been endurable only while through its frame was infused the spirit of reciprocal regard, justice, and social fellowship, under an all-wise and implicitly accepted Holy Catholic Church. The French Revolution can be understood only if the spirit and life of the Middle Ages are known. This tale is essentially therefore a historical novel. The condition of the people of France (and of England) in the last century Dickens himself pictures. The progress of events just before the outbreak in Paris, the three chief political parties and their leaders, the proposed "reforms," and the progress of the bloody events of the revolution, at least until the mighty Corsican appears upon the scene, must be placed before the class. The so-often used stage- and diligence-routes from London to Dover, and from Calais to Paris, a board-map should set forth. Illustrations from various sources may make clear what a stage-coach looked like, what costumes men and women were wearing a hundred years ago, what sort of buildings the Bastille and the palace at Versailles, and perhaps the château of Monseigneur the Marquis, were. (I should remark, by the way, that the use of prints or other illustrations in the classroom is an extremely effective and valuable means of maintaining interest and of conveying instruction. In the case of *Elaine*, for instance, the class should by all means see the well-known pictures of the dead maiden on the black-draped barge, with the old dumb servitor at the helm.) Aside from the history, perhaps the most important correlations of this book are with questions of the economics of industry and of politics and ethics. Is an honored idle class, living on the labor of the mass of the people, a necessary thing in human societies? No country but has such a class. And what has government to do about it, or about anything? Though these are certainly large questions, I feel sure that some sound and honest ideas upon them may be got even from the youngest of high-school pupils; and, at any rate, they may be set to thinking, which is much. The amusing accounts of Darnay's trial, in the early part of the book, and of the summary proceedings in the revolutionary tribunals, suggest certain valuable inquiries regarding our own present mode of conducting trials. To know something of the actual working of our legal machinery is an important lesson in civics. This novel is probably one of the most excellent in artistic respects of all that Dickens wrote. I can merely suggest some topics in this connection: the plot-structure, the delineation of characters, the advantages of a historical novel (a work of art) over plain history, all offer interesting studies not to be neglected. Is there any best way of telling a story composed of several threads? What are the inter-relations of characters and plot? Does Dickens help to a knowledge of life; does he give true and wholly unexaggerated pictures? Is the plot probable? Did Dickens write this novel with any purpose, except to entertain his readers with a picture of life?

3. The biography of *Warren Hastings* takes us, of course, into the geography, the climate, and the strange people and customs of India. The warfare, the religions, the superstitions, the dress, the venerable history of the Hindoos, and their, in some respects, wonderful civilization, open a new realm to the imagination. The history of the East India Company is an extremely interesting link between the eastern and western worlds. In this work again the political correlations and the character studies are important. But especially should the brilliant and effective rhetoric of Macaulay be analyzed as far as may be, imitated as well as possible in the written exercises, made to dignify and adorn the pupil's own expression.

The three works thus far taken up have extensive historical correlations, which ought to receive a fair share of attention; and their correlations with points of economics and civics are scarcely less obvious. In the selections which remain the correlations are somewhat different.

4. *The rime of the ancient mariner*, a great work of art, shares with the works already taken up much of æsthetic and ethical import. One sentence will, without definite references, indicate some of the other desirable correlations of this fascinating poem. There is in it much geographical and astronomical allusion, not a little physical geography and zoölogy,

some folklore and popular superstition, a good deal of interesting philology and of the science of artistic versification. Without further elaboration here the student of the poem will perceive the applicability of each of these points.

5. In the case of a play like *She stoops to conquer*, the useful correlations (except as pleasure is useful) are not numerous. It is primarily a reading to enjoy: the character delineation, the construction of the plot, and the glimpses of English life, offer more for amusement than for sober instruction. I do not regard this as matter for regret, or for objection to this selection among the others. It is well enough to recognize frankly that much of our best-esteemed literature is primarily and almost merely entertaining. Passing to the work of the second and third years we shall be able to note the needed correlations with much brevity.

6. The *Sir Roger de Coverley* essays are, aside from their charm of style, of humor and of reflection, especially instructive as regards the life and character of both country and city folk in Addison's England. Interesting studies, too, are afforded by the history of the *Spectator* enterprise and of the friendship of Addison and Steele, the literary and social status of the time, and the method by which Sir Roger's character is developed.

7. Milton's two exquisite lyrics (*Il Penseroso* and *L'Allegro*), polished to musical and stylistic perfection, are ravishing from their mere beauty. Their lovely descriptions of natural scenery and of English life, and their contrast of the two modes of happiness presented by the serious and the gay view of human existence, are instructive as well as charming. They cultivate both imagination and reflection. Milton's wealth of classical, mythological, and literary allusion offer many opportunities for only too tempting correlations.

8–10. But when we come to Shakspere's works the possible ramifications become rich to repletion. Shakspere's life and times can be understood only in their connection with contemporary and preceding English history. The other great writers of our golden age should not be neglected. It will be found interesting, also, to note some of the great foreign contemporaries of Shakspere—such side-lights broaden the mind, affording glimpses into other literatures, and into the state of the world at large, three hundred years ago. The parti-colored feudal and courtly world which lives in Shakspere's pages, the ideals of character, and the consummate dramatic art which the great poet presents to us, are of surpassing interest. It is almost an education in itself to have risen into a full, or nearly full, comprehension and appreciation of such works as *Hamlet* and *Macbeth*.

These indeed are "real books," even in Ruskin's sense of the phrase, when he says: "You must get into the habit, when reading *a real book*, of looking intensely at words, and assuring yourself of their meaning, syllable by syllable, letter by letter. You might read all the books in the largest library in the world (if you could live long enough), and remain an 'illiterate,' uneducated person; but if you read ten pages of a good book with real accuracy, you are forever more, in some measure, an educated person." And this quotation reminds me to say that there are, in all the selections studied, numerous allusions, which call for (more or less important) incidental and, as it were, momentary correlations. It would be impossible to mention these with any detail, and yet they should not remain unnoticed. Such allusions occur in individual words or statements. They may point to interesting etymologies, to historic or mythical occurrences, to the poetry and fiction of various peoples, or to a great variety of scientific lore.

11. This last named correlation becomes somewhat prominent when Bacon's *Essays* are read; and the very name of Bacon calls for some general account of the causes and conditions of our modern scientific progress in general. Bacon's relation, moreover, to the deductive and the inductive systems of logic, and their real interdependence, the third-year pupil ought to be led to understand. The correlations of particular essays will suggest themselves.

12. Finally, when we come to Chaucer's *Prologue* the most natural and necessary correlations are those of history and the study of the English speech. Chaucer's striking pictures of

faces and costumes, his allusions to customs and ideas of the time, his relations to French and Italian literature, are all fit subjects for investigation. The old poet makes his mediæval period live again for us, not merely in its externals, but in its knowledge and beliefs. If his words could be illustrated in the classroom by reproductions of works of art, or by blackboard drawings, the whole field could be vividly realized.

If now we glance over the table given above, we see that the study of English has or may have correlations with every part of the realm of human learning. Many of these correlations are absolutely necessary to the proper and intelligent appreciation of the works read; others are highly interesting and desirable in themselves. Those not distinctly important in either way must not be allowed to tempt the teacher off on side-tracks. The teacher will show his judgment and self-control in wisely limiting all collateral matters, and by firmly preserving the unity and symmetry of the class-work. The fundamental aims of the English course must always be kept in view, and alluring digressions must be as forbidden. The literature itself,—its substance and its artistic forms,—and the gaining of excellence in expression, must not be subordinated to matters of philology, history, and science. Rightly reduced and unified, such correlations of the literature-work as I have indicated will only illuminate more fully the merits and beauties of the masterpieces of our great makers. The English study, taught with due regard to the principle of correlation, is, I wish to repeat, not only in itself the richest field of work, because of its intellectual, its æsthetic, and its ethical content, but in its ramification it can be made the most broadening and usefully instructive portion of the high-school curriculum. But the attainment of these invaluable fruits must in every case depend upon the equipment, breadth of sympathy, and the tact of the teacher, who must be able to work and so lead pupils to work with spirit and earnestness.

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IV

STUDENT LIFE IN SOUTHERN COLLEGES

The South is a land of colleges. We smile with others over the satiric joke at our expense which relates that, somewhere among our enthusiastic people, the boast was made by a progressive community that they had erected two universities, and were cutting the logs for a third. We are not down to that mark; but must confess to too small colleges and too many of them. Our colleges and collegiate institutes, indeed, are numbered by the hundred. Unfortunately, hundreds of colleges do not mean thousands of teachers, hordes of students, millions of endowment, well-filled libraries, ample store of appliances; too often, the contrary.

We have to confess, too, a liking for sonorous titles; we love a well-sounding, generous notation, even if it is liable to be scanted by strict definition. Personally we grow on from plain Mr. to Captain, Colonel, General, Judge, Professor, Doctor. We can almost guess a man's title by his bearing and dress; we name black clothes with stiff collar and cuffs and a silk hat, Professor or Doctor; while to the white-haired, or no-haired, ruddy-faced, bluff, dogmatic gentleman, frequently found in the South, we as naturally apply the flattering title Colonel, and, in aggravated cases, General. A combination of these characteristics entitles a man to be hailed as Judge, or Bishop, or by some even more awful designation. We set small store by Captain; it is a mere brevet of notoriety, a sort of earnest of titles hoped for.

We are affected in like manner toward our institutions of learning. Their names commonly represent the hopes and ardent anticipations of their sponsors. It is "collegiate-institute," not really, but in laudable fancy; "college" in hopeful anticipation; "university" in the exuberance of misguided imagination. We build an edifice three stories high, with wings, cupola, bell, campus, and manned by five or six teachers, and cannot humiliate ourselves and the community by asking a liberal-minded legislature to dub it only high school; especially when a neighboring town has a building, far less imposing, called a college. So we deny coward modesty, and trusting to Providence, luck, or what not in the future, to justify our faith, hail it university, and shout, Grace unto it! Let none grow envious of our splendid equipment of names and titles; for we are, too often, but playing at college and university.

The big university is rare with us. Our students are, indeed, gathered in bodies of from one hundred to four hundred, at most,—there are some rare exceptions,—in small, poorly equipped, and meagerly supported colleges; where from five to ten professors lead them along the sequestered ways of knowledge, in courses running, for the most part, hard by the line of the old collegiate curriculum. Latin, Greek, mathematics, English, French, German, metaphysics, and natural science—the last in no great measure, generally—compose the menu offered souls hungering for knowledge. In poverty and difficulty we are using such means as we can command to fit young men for life and duty. If, however, Garfield's definition hold, that Mark Hopkins at one end of a bench and himself at the other was a pretty good college, then we may boast some not unworthy colleges.

Most Southern colleges are located in small towns, where the style of living is simple, and the cost cheap. This enables the student to gain an education with the least outlay. The average cost of a year's stay at such a college will be, to the economical student, little above two hundred dollars, and often even less. This cheapening of the cost is absolutely necessary among a people almost universally poor, whose desire for education is increasing beyond the increase of their worldly possessions. This simplicity and segregation of life offers little opportunity to extravagance, and as little temptation to it.

At the same time, backward youths are afforded the advantages of a social order that, though simple and unpretentious, is yet genuine, and in an excellent sense cultivated.

In almost all these colleges the residence-system prevails. There is usually provision of bare quarters free, or at a nominal fee, the student undertaking the fitting and furnishing of his room—usually a very easy business, "the short horse being soon curried." It is almost invariable that two students share the expenses of this outfitting and maintenance. The bare and desolate appearance of most such habitations witnesses to the lack of pence that the student suffers in common with his family and fellow-citizens at large. This cheap style of living is characteristic of Southern student life. Indeed, it is so general as to be fashionable; so much so that wealthier boys are apt to conform their way of life to the primitive and enforced simplicity of their poorer mates. There is, however, a tendency, with the growth of industrial prosperity, to raise the standard and increase the expense of living among students.

The servitors of these room-keepers are dusky "boys,"—as colored menservants are called without reference to age,—who are commonly traditional hangers-on of the college; themselves sometimes notable institutions. They illustrate the immortality of the parasite; serving fathers and sons from generation to generation. These darkies are the brokers and purveyors of the shifting student body, and the depositaries of college tradition as well. They deal in second-hand furniture and cast-off clothes; provide for the needs of their youthful employers, from laundry service and clothes-mending to surreptitious suppers and late breakfasts, all conformably to the generosity or financial ability of their beneficiaries. They buy the furniture of the departing student cheap, commonly getting most of it for arrears of debt, and sell dear to the green freshman. They are long-suffering in respect of debts, charging no interest and often collecting no principal. They are happy-go-lucky fellows, not scrupulous as to misplaced matter, but rarely chid for such neglect by their masters.

There is apt to be a good deal of student-visiting among the girls of the neighborhood. The college belle flourishes in the South, and marries, too, at her leisure. Student beaux are at a premium, and there is now and then a sort of town and gown rivalry stirred by the preference shown to the favored sons of knowledge. This adds a spice of mild excitement to the monotony of college social life. The usual interests absorb these juvenile social circles; flirtations, college rivalries, fraternity and literary-society squabbles, and the like startling incidents. The girls are active partisans, they "sport" various badges and ribbons, and lisp various shibboleths, or shout various slogans, as taught by their gallant instructors. The earnest student, however, is apt to avoid "calico," being of the opinion that study and society are incompatible. Thus the number of students who play the rôle of beaux is not large, though devoted.

In small towns the college is an important feature. All its celebrations and festivities are well attended, and heartily enjoyed. Debates, orations, contests, examinations, are taken seriously by the community. Staid gentlemen and elderly ladies discuss with interest, and sometimes even with warmth, the merits of rival orators, or football and baseball heroes; while the younger element of society go wild over such matters as match-games and medal-contests. In the larger towns, the college does not cut so great a figure; other attractions divide with it the attention and interest of the public. The small town is the college heaven.

There is but little social dissipation in such college communities; opportunity is wanting. The type of recreations is mild and innocent. In even the large towns theater, opera, concerts, and the like are rare, and generally poor. Occasional picnics, literary gatherings, card-parties, and less occasional germans somewhat vary the monotony. But as most of these colleges are under control of some church, theater-going, card-playing, and dancing are not common among their students. Even in State colleges, so strong is the prevalent religious sentiment against these "worldly amusements," that the authorities eye them askance, and seek to moderate indulgence in them.

Among themselves, Southern students associate on common ground. Democratic ideas prevail. Questions of blood, wealth, and social standing have little or no influence on the social relations of the students. Not that such distinctions are not regarded: the well-born boy is not unmindful of family name and fame; nowhere is good descent more cherished. But neither this nor any other accidental difference is suffered to decide social or other standing among Southern collegians. The possession of wealth is, as yet, the last possible ground of claim to unusual consideration or privilege. The assertion of any such basis of superiority would be met with derision. Students are reckoned and valued according to ability, gifts, excellence in some direction, either physical, mental, social, or moral. Good presence, pleasant manners, even mere athletic skill may give a sort of distinction, now and then, perhaps, disproportioned to their importance; but blood, riches, and social position do not affect these small republics of letters.

Students mingle freely on equal terms. Cliques and caste are almost out of the question in such small communities. Natural selection and affinity govern our student association. Every man soon finds his level, and his value is as soon determined by that clever intuition which enables a body of undergraduates to discern the character of professors or fellow-students with rare accuracy and discrimination. A student-body's estimate of any man whom they have observed is about as near the truth as human discernment comes. Southern students treat their chums with cordial familiarity; but to fellow-students at large they are more formally polite. No matter how young he be, each fellow takes his personality rather seriously and exacts such consideration from others as the mature man of the world expects in the walks of life. Not only disrespect, but even pointed neglect is apt to be resented. Such formality enforces mutual respect. Disregard of the rights and feelings of others soon causes trouble, most often personal difficulty; so boys do not traverse these canons of propriety, unless they wish to make trouble.

This naïve estimate of his personal worthiness and premature assertion of manly right by the mere boy is not mannish nor mock-heroic in effect; it dignifies and elevates boyhood, and makes the boy in an excellent sense father to the man. It is corrective of that contempt-breeding familiarity, so often resulting, with both boys and men, from disrespectful and irreverent association that forgets what is due to others, because it feels no genuine self-respect, and fosters no sentiment of personal worth. It is well for even boys to cultivate the sense of reciprocal social and moral obligation, and to realize the danger of transgressing certain fixed bounds of propriety and amenity.

Between students and professors the relations are such as prevail among men of the world, tempered on one hand with such deference, and on the other with such abnegation of authority, as make, in combination, broad and safe standing ground of mutual understanding and appreciation. There is usually strict avoidance, on the part of the professor, of severity and of abuse. If rebuke be demanded, it is nearly always administered in private, and with the greater effect on that account. Our students, for the most part, answer appeal more readily than reprehension; it is easy to lead them, and almost impossible to drive. The professor is considerate of the student's feelings, and he polite and deferential to the professor. The Southern student will not long endure captiousness nor abuse. The professor may be severe, but when he passes the limit that a man of the world would not allow to be traversed with impunity, the student is apt to revolt, and either appeals to higher authority, or leaves the institution, or, in extreme cases, takes the law into his own hands and opposes himself, man to man, against his oppressor. Sometimes there are personal collisions between professors and students, nor is the fault apt to be the student's alone. He will not brook indignity, no matter what the consequence of resenting it. Generally, however, the teacher who makes himself obnoxious is met by the students with chilling and constrained politeness, neglect of his lectures, indifference to his wishes, and by other effectual methods of retaliation, which prevail generally against even arrogance and stolidity. Good feeling and mutual esteem and regard are, however, the rule. The classes are small, the professor knows all the men, and they are commonly on excellent terms, personally and officially.

In athletic sports the Southerner rarely cares to excel. He does not like unusual work, unless he is forced to it, and athletic training seems very much like work to an onlooker. The enervating influence of the climate, together with a lack of intercollegiate rivalry in athletics, and these re-enforced by a constitutional indisposition to Mark Twain's "working between meals," have caused athletics to languish in Southern colleges. There is some awakening at present; tolerably equipped gymnasiums are found here and there, and more or less interest is evinced in athletics in our colleges generally. Such interest, however, is more an imitation of the general fashion than the outcome of any serious realization of the value of physical training in the work of education, or of any genuine interest in intercollegiate sports. Our students are fitful in their attendance upon gymnasium exercises. They go joyously for a week or so, until it begins to grow wearisome; then only the strong hand of authority can drag them there, and not even that can make them train efficiently. They spurt a little in getting ready for occasional matches, then lapse into indifference. The Southern collegian, being Southern, likes to "loaf and invite his soul" and take his athletics vicariously. He can yell and "rah," and guy with the loudest, on occasion,—for example, when a strong visiting team is to be "rattled,"—but he makes that contribution, sitting at his ease, his favorite posture—when he may not lie down! Most of our students hardly play the popular games at all. The athletic few have the grounds and honors all to themselves. Enforced training alone will answer our need. In any system of voluntary athletics most of our students would neglect bodily exercise almost entirely. Furthermore, where there are several absolutely necessary uses for every dollar, physical education will be last served at Southern colleges. Such training is regarded as of little importance compared with the training of the mind.

As to literary and social organizations, literary societies and Greek-letter fraternities are found in all our colleges. The former has always been the school for young debaters and would-be orators. Learning to speak has been its reason for existence. The practice of oratory, the cultivation of eloquence, was the highest aim of the Southern collegian. Honor, fame, distinction, were sought in the South mainly through public speaking. The Southerner talked and declaimed himself famous, or rested in oblivion. He claimed that the orator was born, but gave a good deal of pains to making him. Naturally, the student sought to attain this greatest distinction; it was the summit of his ambition. The literary, or rather the oratorical, society flourished in such a state of things. But times and men are changed. The Southern student does not find his sole account any longer in training for rostrum and hustings; he seeks the prizes of life along other and more commonplace lines. The whole land is succumbing to the cold criticism that cynically characterizes our old-time, soul-moving, silver-tongued oratory as sky-scraping clap-trap. We seem about to be forced to give up our typical orator. In truth, the time-spirit is too strong for us, and under its influence we find ourselves wearying of too much eloquence. Fond as we have been of oratory, we are compelled to grant that it has been overdone; our capacity for it is lessening, the public shrinks visibly, especially from the overflowing eloquence of commencement.

The literary society is now the practice-school for writers and parliamentarians, as well as for orators. The social functions of the literary societies have been largely usurped by the fraternities. The ancient glory of the literary society is departing; it has lost its *raison d'être* in the disappearance of that efflorescent, Asiatic style of speaking that made such a stir among us before the war.

The Greek-letter societies abound in the South. The weak effort of several institutions against them has ceased, and they are now tolerated, if not welcomed, everywhere. They lead a hand-to-mouth existence, however, coming and going, declining, disappearing, reviving, as they needs must, when so many crowd into the small institutions of the South, and insist on struggling for existence in such barren soil. The yearly additions to the college roll are too few to make a careful choice of fraternity eligibles possible; two or three fraternities might flourish in a small college, but five or six simply starve; what are the small freshmen loaves and fishes among so many! Southern students, again, are not rich enough to equip fraternity chapters permanently, and assure their stable existence; chapter houses, costly paraphernalia, banquets, and the like are out of the question. As the result, fraternities with us are impermanent, unstable, and proportionately uninfluential. They have crippled the literary societies in most Southern colleges, by substituting fraternity loyalty for interest in these; or, by political antagonisms in the scramble for honors and offices, they have sometimes rent the college community into factions. They cannot be said, at present, to be a helpful influence, and are not forwarding to any appreciable degree the cause of higher education. They are, in some places, threatening to introduce among collegians artificial distinctions of caste based on wealth, birth, imagined social superiority, and the like—considerations contrary to reason, and alien to the spirit of American life.

The Southern college is not favorable to the experiment of student government. The boys do not participate formally in college government. The conviction prevails that authority should be allied with and based on responsibility; and since no responsibility for government can be devolved, save nominally, upon students, they may not participate in such government. Again, there is a maybe old-fogyish idea among us that the aim and object of college work, to teach boys self-control and self-direction through submission to constituted authority, is best subserved by the exercise of that authority through its responsible agents; and that boys in tutelage are not fitted as yet to do the thing which they are to learn through the disciplinary processes of that tutelage. Men are not fit to command and direct till they have learned to obey. Our students do not ask for such participation, and it will hardly be either offered or yielded soon in our conservative land.

Here, again, smallness of numbers and simplicity of life and government solve for us the problem that puzzles greater and stronger institutions. Questions of this sort do not trouble us. Bread and meat are our anxiety. The kindly relations subsisting between professors and students, amounting to almost family association, the courteous regard of each for other, the felt community of interests, and a certain naïve content simplify for us all such matters, and enable us to live and let live, as they did in the early world. The simple and sufficient rule of our organization is the adaptation of the unwritten laws and standards of public opinion as they prevail in life to college life and relations. We throw rules over and treat boys as responsible beings, as Christian gentlemen. The Southern collegian does not look on himself, nor is he regarded, as a social and moral anomaly in a sort of limbo, between childhood and manhood. He likes to be treated as a member of society and of the State; as a reasonable, tractable, responsible being, liable to public opinion, governable by ordinary methods. He considers college life as a practical apprenticeship to real life, in morals, manners, and ideas; and as he prefers to hold himself and be held amenable to social, moral, and business requirements, such as must control him when he leaves college, he declines to dodge behind the mediæval quibble that students are a nondescript class not yet morally and legally responsible, like other folk. Such segregation and coddling are humiliating to his self-respect and derogatory to his manhood.

This method in college discipline helps to bridge that chasm intervening between college and life, dividing the student from the world with almost monastic severity; a division that makes the student's sudden transition from college walls to business pursuits a trembling, jerky, dislocating leap into an untried way of life, so different from the conventional unworldly college existence that the novice must unlearn his old code of proprieties and principles, while adapting himself to another and unsympathetic standard.

Thus kept in touch with the world, the Southern student, as might be expected, interests himself in live questions, present issues, social, moral, civil, scientific, political themes and movements. He studies the men and measures of his day, of his own land, of his own State especially. In truth, he narrows his attention too much upon home matters, and his tendency is to partisanship, in politics especially. He has to struggle against persistent sectional prejudices. He lacks the poise of maturity and the perspective of wide experience, and is apt to be extreme and intolerant. He is still in the shadow of the war—a war closed in the field to break out everywhere else, in churches, courts, hustings, legislative halls, newspaper offices. He often has bad examples, and then he has strong convictions that he will hold to till death, and they are not always pleasant to outsiders. It is unfortunate that he becomes so absorbed in home matters, and equally unfortunate, some of us think, that in politics home matters have only one side—our side! Thus the collegian is apt to become, ere he passes the horn-book of statecraft, a prejudiced politician, bigoted to provincial notions of principle and policy. Against this tendency, however, both teachers and the better class of pupils struggle, and the right view and method are winning. Southern collegians lead Southern thought, and may be trusted to direct it in lines which, though starting from Southern State-rights principles, and rooted in old Southern traditions, yet tend to soundly federated unity and common national glory. The Southern student's patriotism is broadening and deepening, to embrace all this great land.

The Southern collegian takes a sort of puzzled interest in modern socialistic and agnostic theories, in the isms and the schisms that tear the outside world. But it is a scientific and rather impersonal curiosity; for these are not his problems, immigration having not yet turned his way. He may now and then fancy that he detects premonitory symptoms of infidelity —pimples, as it were, of a threatened outbreak of agnosticism or socialism; but he usually escapes. He is traditionally orthodox in the matter of religion, holding rather lovingly here by the mother's apron-string. In politics he has an incurable, chronic tendency to the doctrine of State-rights that bodes well for the future of this land.

But the most characteristic feature of discipline in Southern colleges is the allegiance of the students to the honor system, in the regulation of their relations to college duty and government. This sentiment grows out of their insistent conformity to the ordinary standards of public opinion, already noted. This honor system, as it is called, is in vogue in almost all Southern colleges. It means that, on occasion, each student is expected to give his word and stand by it; is expected to behave like a man of honor. He is held to strict account by both professor and fellow-students whenever this rule is applied. The Southern student likes it; in fact, he desires it. The system exists in obedience to his own demand. He wishes to be put on his honor. The question with him, then, is not what are the rules, and what the penalties; how many demerits before expulsion; how to beat professors and outwit officers; but simply what is a gentleman, a man of honor, expected to do? The answer to this question indicates to him the course of conduct he must pursue. Each student thus becomes the administrator of the law upon himself. Of course, no system will make knaves virtuous; there will be cheats and liars, tergiversations, prevarications, dissimulations, while boys are boys and men are men. We have to purge the flock of black sheep, now and again. But after all, the honor system, as a means of regulating and directing a body of students, is with us efficient and highly satisfactory.

This spirit permeates and regulates all collegiate government in the South, but as a rule it is not administered on ordinary occasions. In class, for instance, the student does not consider himself under obligation to abstain from prompting, peeping, and the like small strategies of the idle and indifferent. If, however, the request is made that he take no such advantage he obeys readily. Pranks, skylarking, mild sophistications, and skillful fencing with the professor, in the effort to make that inquisitorial agent believe that the student knows all about it—a lame and impotent effort usually—these the undergraduate hardly regards as coming under the honor rule, unless by special enactment; whereupon he at once stiffens up, and meets the responsibility with dignity and candor.

In some Southern colleges, as a last resort of discipline, every student may be put on his honor, to answer yea or nay, to a possibly self-criminating, categorical question. When such an exigency arises, whatever may be the consequences, the truth comes, like lightning to thunder. The boys face the crisis unblenchingly, though the next train may see them abandoning the college in rage and disgust. In such an inquisition the order of the legal courts is reversed, and the student is asked, while avoiding everything that might incriminate a fellow-student, to own up to all his own acts! And he does it like a man! Again, if, in some mad escapade, into which hot blood sometimes betrays them, one of their number be caught, you catch all; the last boy concerned will come forward and confess, and bear the penalty. Nor will they, when put on honor, palter, quibble, or palliate; but they tell the whole truth, not blinking a single incident, however hurtful. Even when guilty of disreputable and inexcusable conduct, they will own up.

The professor has no fear in sending a boy to the board, text-book in hand. He simply tells the student how he wishes him to use it, and is calmly certain that the boy will do as he desires. It steadies even doubtful characters to know they are thus implicitly trusted.

It is, however, in the trying time of examinations that this honor rule is formally forced and strictly adhered to; and it is then that its good effects are best seen. Southern students understand that when an examination paper is finished, it is to be signed with a pledge that assistance has neither been given nor received; they accept this condition, and become personally and entirely responsible and self-directing throughout the examination. The professor is present, coming and going as he pleases, but he is not watching, not overlooking; there is no hint of suspicion, no attitude of espionage. In truth, the whole matter of guarding against wrong-doing has been referred to the students; they undertake that; the professor is no more concerned with it. In our examination rooms, cheating is easy enough; very often the student has but to turn to the book in his hand to find the answers to the questions of the examination paper. Men fail time and again with the book that might have saved them in their hands. But if it is a temptation, it is rarely yielded to. Now and then a man goes down; but the vast majority refuse to save themselves by taking advantage.

Not only so, they will not suffer the evil-minded to transgress. In some colleges they become the guardians of the commonwealth, the maintainers and enforcers of the honor of their classes and their college. The student who dares break his pledge is held to have dishonored his classmates and fellow-students, and they are quick to arrest, convict, and expel such delinquents. The faculty is sometimes surprised by a communication from a class to the effect that they have detected one of their number cheating on examination, have charged him with it, and, upon his confessing, have demanded his withdrawal from college. He almost always leaves at once; and the faculty confirms the action of the class. So, with the story of his guilt known only to the students and faculty, the dishonored man fades out of sight. The utmost kindness is displayed by these students in shielding and helping the criminal in every way they may; but the sentence of dismissal is inexorably administered. Thus do our boys guard their own and their colleges' sacred honor, and put away evil from among us. Such action is far more effective, for both discipline and prevention, than any possible action of boards and faculties.

This application of the honor rule by students to themselves and to each other is the most marked and characteristic feature of our college discipline and government. Other standards and systems prevail elsewhere, sanctioned by custom or persisting, despite sanction, by sheer force of tradition. Nothing is here said in hostile criticism of those systems; let every faculty be fully persuaded in its own mind. But it may not be gainsaid that the cultivation in youth—in boyhood even—of a nice sense in moral relations, and the uplifting of a noble standard of personal honor must tend to the establishment and assurance of high moral character. We of the South value this sentiment and practice, among our collegians and even high-school boys, as earnest of that virile, self-controlling, independent manhood that is our pride and our hope. This high estimate of personal responsibility and careful guardianship of personal honor gives to individual and to national character that moral impregnability against which no onslaughts of vice, no subversions of anarchy, shall prevail.

A word, in conclusion, on the general tone of intellectual life in Southern colleges. The spirit of our intellectual development is trusting, optimistic, acquisitive, but uncritical, unaggressive, uncreative; tending rather to practicality, and submitting, with the rest of this land, to be too easily subsidized to the uses and ends of prevalent industrialism. There is a thirst for knowledge as power over nature, as an industrial leverage for uplifting and establishing material prosperity. There is, as yet, among us little leisure, and therefore little opportunity to make knowledge the basis of culture. But while the realization of the value of education as a help to worldly success is very present and powerful, this realization has not yet hardened into the fixed idea that material good alone is good; an idea that has made trade a struggle for mastery, and commerce a state of war. May our intellectual life, in the larger stages of its development, continue to escape this blight of militant materialism.

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V

THE PUBLIC SCHOOLS OF GENEVA

Since the days of Calvin, Geneva has been an intellectual center which has offered excellent facilities for educating the young, and a delightful place of residence for the cultured of mature years. Not content with resting on the laurels of the past, she continues her efforts to be in the front rank of progress; and her public schools to-day offer in some respects such a contrast to those of America that a brief examination of their novel features can scarcely fail to be both interesting and profitable. The fundamental idea of public instruction is of course to prepare good citizens for the state; but in America it has been acknowledged, by those capable of judging, that the common-school system has largely failed of its purpose, and the need of reform is earnestly felt. On the other hand, the Geneva system appears to the writer well adapted to its ends, namely, to prepare men for the battle of life, women to be good, practical wives and mothers, and all to make life as bright and pleasant as possible. The result is the best justification of the theory; for the poor are industrious, joyful, and intelligent, while the rich are intellectual and devoted to the public weal. The name of one of the living illustrations of the latter fact was recently sent throughout the civilized world as that of the president of the tenth Oriental Congress. He is one of Geneva's millionaires, and entertained the whole Congress one day at his superb home—M. Edouard Naville, who is professor of Egyptology and Egyptian history at the university, on a salary of one hundred dollars per annum.

Education is compulsory from the sixth to the completion of the fifteenth year; and is not only free in principle, but paper, pencils, pens, and similar supplies are provided, at least in the primary schools, at the public expense. The question of religion is carefully excluded from the schools, though abundant provision is made for the moral instruction of the children; and the government provides religious instructors, both Roman and Protestant, whose classes the children must attend, if the parents desire it, though no one is compelled to send his children to either. Alcoholism and the abuse of tobacco also receive attention, and the children are made to understand the danger of commencing the indulgence of a taste for the tempting excitants.

Practically from the beginning of school life there are slight divergences in the instruction offered the boys and girls, which are founded on a recognition of the differences of their physiological structure, and the different aims in life which are natural to each. On the other hand, the girls may elect, especially in the higher branches, to follow the courses usually pursued by the boys, even to the university and the professional schools. For both sexes gymnastics and manual training occupy a considerable portion of the early school years, thus providing for sound bodies and expert hands, which are certainly as necessary in practical life as educated brains.

With the first year instruction in moral precepts commences, and the breadth of view increases with the years of the pupils, so that they later hear talks on the formation of character, the relation of the school to the family, and to the community, church, and state; and even the girls may take as electives the elements of law, including questions of nationality, marriage, and divorce, with effects of the former on property, obligations, etc.; while the principles of the law relating to life insurance, bankruptcy, and bills of exchange, are treated in a simple and lucid manner. Practical instruction in hygiene commences with impressing on the minds of the children in the first primary class the necessity, if not the godliness, of cleanliness, from which point the teacher advances to practical councils and talks on digestion, circulation, and respiration; and when the girls are somewhat mature they are taught the hygiene of infancy, feeding, weaning, and teething. The work and duties of a nurse of the sick, the preparation of domestic remedies, the first care in case of accident, and the matter of disinfecting, all receive attention, and prepare the girls for the home duties which they should look upon as their highest aim and pleasure.

Meantime the boys have not been idle, but have had their lessons also in morals and hygiene, and in drawing, and have been occupied in learning to saw and plane, to make little trellises of iron wire, etc., and have heard explained the principles of baking, tailoring, spinning, and weaving, the first elements of hydraulic, steam, and electric machines, and of printing and photography. As with the girls, drawing is given a large place in the curriculum from the first, though later the boys have more of it, while the girls turn their attention more to household matters. The instruction, especially in needlework, is considered a decided success, and in 1893 an extra hour per week was devoted to it, with pleasing results. Beginning with the simplest matters of cutting and sewing together, the girls gradually advance by easy stages to the making of all sorts of simple clothes for women and children; they learn to knit stockings, and to repair the heels and toes, when worn out; and besides they are taught crocheting and other fancy work by means of which they can beautify their homes at small expense and provide pleasant occupation for leisure hours. They receive regular instruction in domestic economy, the care of the house furnishings, bookkeeping of home expenses and receipts, and general talks on the part which the mistress of a house should play.

The school buildings are provided with large show-cases, in which are arranged from time to time what may be designated as small loan exhibitions, which are gotten up by the teachers for the wider instruction of the pupils, and are considered an important element of the scholastic activity. Singing is taught from beginning to end of school life, first in simple melodies; but two-part songs are commenced while the children are still very young, and later, instruction in four-part singing with the elements of harmony is given. The consequence is that the Genevese, and in fact the Swiss in general, seem always to brighten their life with song. Singing in the streets at night is not forbidden by law, as is sometimes the case, even in university towns in America; and occasionally one is annoyed instead of pleased at the result. But certainly that is a small price to pay for the good effects of song which is so well adapted to drive away thoughts and plans which would be much worse in their results on the general happiness.

A very important feature of the public instruction in Geneva is to be found in the warm interest in its progress displayed by influential and public men. Every school has its special commission of surveillance, composed of men of recognized standing in the community, of which the *ex officio* chairman is the member of the Administrative Council who is at the head of the department of public instruction. The examinations are conducted by juries of influential citizens, thus stimulating the children to do their best, in order to get the recognition of men whose names are household words in the city. Each year the authorities spend five thousand francs in prize books to be distributed among the children of the primary schools; and on the day of the distribution the city fathers, in full dress, go in procession with the children to the great hall of the university, and there make the children happy by their kindly speeches and the pretty books given to the most industrious scholars. The primary schools are entirely under cantonal control, so that there exists a certain unity between the city and country schools. The teachers, according to our ideas, are poorly paid; receiving salaries ranging from 900 to 1650 francs, not dollars, per annum, and averaging 1288. As in other countries, the women in general are not so well paid as the men, their average salary being 1161 francs, while that of the men is 1525 francs. Within the last few years there have been established three "school kitchens," which are directed by "devoted and active private committees," in the words of the public report, where the school children can get something decent to eat when they have not had time or opportunity to get it at home. During 1893 these kitchens were open on 84 school days, and were visited by a daily average of 249 children.

Perhaps the best illustration of the recognition of the value of the Geneva school system is to be found in the large number of pupils in them who are not Genevese. Leaving out of account the numbers attending certain technical schools, which are not accessible to the writer, the whole number of scholars in 1893, including the infant schools and the university, was 14,890, of which number less than 39 per cent. were Genevese, while 24 per cent. were Swiss other than Genevese, and more than 37 per cent. were foreigners. Of such a practical recognition of her worth as an educational center Geneva may well be proud, and thereby feel encouraged to continue in her march of progress.

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VI

THE TEACHING OF LOCAL HISTORY

The life of history is in the sources. These are whatever the men of a bygone age have done, or made, or written, and left to us living men, as embodiments of their own spirit, endeavor, and ideal. The ruined brick church at Jamestown, the crumbling adobe at San Diego, the burial mound at Marathon, the façade of St. Mark's, these are monumental sources; the old colonial uniform, the old delft plate, the broken glass from Hadrian's villa, are what we might call bric-a-brac sources; while of records the world seems full, when once your attention is turned that way: old letters, with strange old stamps and broken seals of red; old sermons, the cramped hand crowding close to the margin of the paper; old charters, of curling yellow parchment, with royal seals dangling at the end; old maps, out of all proportion, and strangely scribbled over with uncouth names, but giving a vivid notion of the mysterious nature of the world in which their makers lived; endless newspapers and books, in the great libraries; endless autobiographies and diaries, of soldiers, written in camp and field; of pioneers, written on the lonely, adventurous frontier; of statesmen, written after long days of hard debate; of women, written in weary, anxious hours, while men were fighting, or plowing in the shadow of Indian-haunted woods—such are some of the sources in which the life of the past comes down into our life; and in their study alone, can we enter the past to which they belong, and of which they alone remain.

Two chief advantages arise from the use of the source in history: first and foremost, the source brings us into the closest possible relation with the past. The men have passed away; their deeds and spoken words have fled with time, but their records still remain; things which they have made and written with their own hands, and which we may touch with ours; things which their eyes and ours alike may look upon; the fossils, the imprints, the casts of a bygone time which reveal to us its life, its paths, its points of view, its loves, its hates and dreams. The student gains a sense of reality from the source that nothing else can give, for through the source the men of the past give their message directly without any middleman to explain their meaning away or to make their words suit his own particular theory.

This is a use which sources have for the student of history; to the teacher, they have this use also; and added to that, a special pedagogical use, in that they force his pupils to look at history in its bare and rugged aspect; and to re-create for themselves the living man from the broken torso, the narrow world of Indian life from the old arrow-head, the narrow and intense thoughts of the Puritans from the blunt intolerance of the cobbler of Aggawam. With the sources in hand, he is compelled to re-create for himself, to enter into new points of view, to see and understand other standards than his own and those of the men of his own time. So he learns to inquire, judge, sympathize; and prejudice, which is only a kind of darkness, vanishes in light.

The study of local history has an especial advantage from this point of view; for in local history alone can the teacher most nearly bring his pupil face to face with all the sources, and give him the best training that history has for him in accuracy, the nice weighing of evidence, the sympathetic interpretation of the past. In the second place, through local history, the citizen finds a close and intimate connection with the great whole. The hills and valleys of his childhood take on the glamour of romance that always comes from the touch of a bygone life. Here the Indians smoked about their council fires; here passed a Spanish knight, armed *cap-a-pie;* here a pioneer first broke the soil, and stood ready, gun in hand, to protect his home from all invaders, whether wild beasts or wild men; here men sprang armed to conflict; here they suffered and died for liberty, independence, or perchance for human freedom. Thoughts like these add beauty, pathos, and meaning to the poorest landscape, and give to common life the touch of poetry. The traveler in Europe realizes this, as he sees the pride and love with which the common people look upon their historic monuments. The great cathedral of Siena, the exquisite bronzes of Florence, the memories of Tell among the Swiss mountains—from these breathe poetry and wonder for the child, and an atmosphere of charm which always lingers in his mind and eye.

In America our local history has not yet received its full development. We have been careless of our monuments and relics, which, to be sure, are of a different sort from those of Europe, though no less interesting and important to preserve. We have, as yet, slight growth of song and story, clinging with living grace to the broken fragments of the past. Worst of all, we do not know our local history. All this the teacher can do much to change.

First of all, let him ask himself, what are the connections of my city, town, or vicinity, with the general history of the country? Take, for instance, my own native place, Oswego—a dull little city on our northern frontier, lying asleep by the blue waters of Ontario. Commonplace enough it looks, and no great man, no great deed has signalized it; but let me tell its connections. First of all, its Indians were the fierce Iroquois, best of all the fighting tribes. Their songs and traditions still live among their descendants; their manners and customs, their village and forest life, are minutely described in the *Jesuit relations*. In the soil are still found their arrowheads, and on their reservations they still make their primitive wares and fabrics. In the Colonial period, we have connections with Champlain, the Jesuits, and the fur-traders. There was still a trace of the old French settlement left when I was a child. There are old maps to be seen, showing Oswego as a wild wilderness with a fort, a river, a few canoes and huts. In the French and Indian war, we were an important frontier post, for which the French and British fought back and forth. Of the old forts there still remain the well-authenticated sites. With the Revolution we had but little connection, but with its close the period of our growth began. We were in the swim of the great commercial and industrial boom that sprang up from the opening of the Welland and the Erie canals. The lake was white with sails, and every wind brought in the lumber of Michigan and the wheat of Ohio and Illinois. There stands our noble lighthouse, and the long stone pier, badly fallen to ruin, the green grass springing up between the stones, and old wharves, grass-grown too, where idle boys fish long afternoons in the sun, while the tall elevators have, one by one, been turned to other uses or have fallen to decay; for our greatness and wealth passed away with the opening of the railroad, whose great line of the Central passed to the south of us. Our fine canal with its locks suffered decay as well, and the old taverns with their wide piazzas were deserted and haunted places. Still, life went on in Oswego, and when the Civil War came we sprang to arms with the whites North; our fields were white with tents; in a long shed by the lake-shore our soldiers ate their rations; along our streets they marched away amid tears and loud huzzas. To many a house came back the story of its hero, freezing, fighting, starving, dying, for what he deemed the right. We children picked lint for the hospitals; one of our women marched away with her husband, and became a nurse, well remembered and much beloved; a stanch old preacher, white-haired and ruddy-faced, almost worshiped by his people, prayed to the God of battles every Sunday morning to strengthen the hands and the hearts of the North.

But I need go no further, though this by no means tells the story of the dull little town. What I have said is enough to indicate the lines of inquiry. The next thing is to see what the Oswego teacher will do, with all this wealth at his command. We have already seen the value and the power of the source in history; the Oswego teacher in Oswego can use this for all that it is worth. In the library he will find the great series of the documentary history of New York. In these volumes the old maps, the old Jesuit relations, the lists of New York governors, the old military reports, are all embodied. He will set the children hunting there; ask one to find the first map which has Oswego placed upon it; another to find who were the first people who came there, and what they came for; he will exhaust these books of all they can tell about Oswego. He will go with his pupils to the county clerk's office and see what they can find there of the early government, of the first mayor, of the first common council, the first board of education, and, above all, he will hunt up the old maps. He will take his pupils to the fort, and let them see why it is placed well for defense; take them to the soldiers' graveyard, lying desolate on the hill, let them wander among the graves and read the old inscriptions; take them along the wharves and the pier, and setting them in the sun, let them write out, pencil and paper in hand, as well as they can, a description of how it looked in 1830. He will set them to ransacking their own homes for old letters, old newspapers, old relics, old bits of pottery, old costumes, old weapons. He will ask some old soldier of the Civil War to come to the school and tell his story of the camp and the field.

This work with the sources must precede all else; this will make the pupil familiar with places, persons, and things. Now must begin the next work. After the material is all gathered, then comes the time to question it. From these sources, the teacher and his pupils must reconstruct the local history in its orderly proportions. Now is the time for essays, classified collections, public exercises, notebooks, and all the rest of the paraphernalia of study.

The questions which should guide the study, in the case of Oswego, would be something as follows:

First of all, what was the Indian population here? What were their manners and customs, their thought and belief? What was their welcome to the white man, and what has become of them now? Then, who were the first explorers and settlers? Where did they come from, and why did they come? Why did they settle in this particular place?

What were their character, their education, their ideals, faith? How did they make a living in their new home? What were the routes by which they came and by which they were tied to the general net of civilization?

Had we any connection with any of the wars of the republic? Were any of our people at Valley Forge, at Yorktown, at Lundy's Lane, at Gettysburg? Who were our heroes in these wars? Again, what connections have we had with the political, intellectual, and artistic worlds? Has there been a scholar, a statesman, a poet, who was born in Oswego, or who loved Oswego as a home?

I have been thus particular about questions which should be asked, because I could thus most easily reveal the wealth which this vein of local history may possess.

One important outcome of these local studies should be the formation of local historical collections. These should be the result of the joint labors of the pupils and teachers of the whole locality, working together in a club. This museum should gather to itself the visible remains of the whole history; it should contain Indian relics, pictures of native Indians, photographs of historic sites and buildings; all the historic maps of the locality, photographs or other pictures of citizens who have been prominent at critical periods; old costumes and uniforms; old dishes, utensils, and tools; coins, stamps, and portraits—everything, in short, which serves as a material link between then and now. There, too, should be found the files of local newspapers, which should be made as complete as possible, and as soon as possible firmly bound. Letters, diaries, manuscripts, which have a local historic value, should be collected and bound, or preserved in legible and authentic copies, the originals being preserved for the occasional reference of scholars. All the literature that has gathered about the place should also be gotten together—any poems, novels, biographies, which celebrate the place or its citizens. The old people, the old soldiers, should write out or dictate their recollections, and these manuscripts be added.

There is still another class of sources we should save from oblivion, those of our foreign immigrants. In every town, in every place, there is a large body of European immigrants. Where did they come from? Have they any pictures of their old homes? Why did they select this for their new home? What differences do they find between the old and the new? Perhaps they were Irish driven out by famine, Germans driven out by the conscription, Italians by heavy taxes and an extreme of poverty of which we do not dream. In nine cases out of ten their stories will be found to have interest and meaning, and should find a niche of their own in the museum and library of local history.

But should we, in local history, deal with all the dull periods; make it a point to know the history thoroughly year by year, or deal with the salient points, the vital connections? Are we to mention such details as smuggling a dozen china handkerchiefs, or a bushel of salt, or the complaint of a citizen that his street is not kept in good order, or that there was a squabble in the courtroom on such a day, or that a refractory mustang on a certain California journey tried to throw an imperial commissioner as he was crossing a stream, or that the said commissioner was seasick on his return, or that John Mulligan, a native of Tullybamman, Ireland, came to live in Syracuse?

As teachers, we must deal with salient points, with points of vital growth and large connection. But in order to gain these points, to make these connections, somebody must search through large masses of material that may seem of very little use, and may yield little of significance. But there lies the way; if we are to know that at a certain time, in a certain place, men lived without law and order until their misery and confusion drove them to some effective government, you can only reach this conclusion, if you are working with the sources, by reading in detail about this bushel of salt smuggled in, that fatal quarrel that ended with a shot, the disappearance of this herd of horses, rifling and murder on this or that lonely ranch. Or if you would know that the population of a certain place came mostly from Ireland or from Spain, how can you know it except from just such details as you may learn from the tombstone or the marriage record, in short from such details as that John Mulligan, native of Ireland, came to live in Syracuse? The pettiness disappears when the petty detail is one of a thousand strokes that paint a great and beautiful picture. Or supposing that the petty detail is essentially petty, has no significance in proportion to the general whole, is but a splash of paint on the wall—is it not worth something to learn what to reject as well as what to accept? To know what has no worth, as well as to know what has a story to tell, a place in the picture?

So local history has its place in study and teaching, a place which nothing else can fill. There lie finally the labor, the reality, the very ground of history. There the citizen finds his home in the great world of time as well as in the great world of space. There he learns how to interpret history through the toil and heroism of some few men whose works he has seen, whose words he has read, in whose footsteps he himself daily treads.

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VII

DISCUSSIONS

THE SPIRIT AND THE LETTER

When Ottfried Müller put forth his monumental edition of the *Eumenides*, he included as an essential portion of his task the attempt to reproduce in German verse both the spirit and the form of Æschylus's tragedy. He foresaw that Godfrey Hermann's bludgeon would promptly descend upon his audacious head. In his preface, however, he stoutly denies Hermann's right to play the schoolmaster over him, until he has himself shown that he can adequately interpret, as an artistic whole, some one ancient work of genius: "an achievement," adds Müller, "which is *the most crying need of our classical scholarship at this moment!*"

Perhaps that fatal journey of Müller to Athens and Delphi was the greatest disaster to Hellenism in our century. Had he returned to maintain energetically for thirty years more the leadership he had already won, the general tendency of his nation might have been modified; surely the larger constructive and ideal results of research could never have been neglected or ignored. Neither Jahn nor Curtius, however, could hold his scepter.

But after all, the contrasts, so often drawn, between English humanism and German scientific specialism are in part misleading. As Munro, Mayor, and others quite equal the Germans in minute research, so Germany has produced in our century beautiful models of constructive work. Böckh, Mommsen, Schäfer, Holm, Ribbeck, will at once come to mind. The last-named has actually put forth a readable treatise on Latin poetry in three tall tomes without a vestige of citations! (This lack he is, to be sure, to make good in a supplementary volume.)

American scholars have borrowed, and in some instances bettered, the severest methods of scientific research, particularly in statistical linguistics. The larger and higher tasks of construction and interpretation have not yet been attempted.

Nay, the conditions apparently thwart and distract even those called by nature thereto. When our foremost Hellenist collected his *Essays and studies*, the brilliant critique of Lucian was left untouched, *because* it would have crumbled away at once and insisted on reconstruction by the maturer hand. But if it had been a study of the articular infinitive, thus two decades belated, that very fact would have spurred the author to satisfy his own present critical judgment before a line could see the light! The history of Hellenic life and literature, of which the Lucian paper seemed a segment, we still await.

Younger leaders occasionally assure us that they value the ideal above the scientific, interpretation above analysis. But the only American works actually known and cited abroad, the only things, indeed, that rise above the bread-and-butter level of school grammars and annotated texts, are on "*Cum*-constructions" and "Analogy-formations," or the master's own masterly papers based on statistical investigations.

All honor to these men. Through them sound learning has found a home here, and American scholarship is respected even in Germany. But after all, it is surely not by such results, as final fruits, that Hellenism claims the place of honor still in the higher education of the twentieth century? Some relation to the spiritual and ethical needs of living men we all feel that the great masterpieces of antiquity still have. To restate those relations afresh to each generation of thoughtful men is the most imperative duty of real leaders.

As Americans, we claim a certain largeness of view, an emancipation from old-world associations and traditions. Shall nothing of this be felt in our scholarly activity? Grote thought his political experience helped him understand the Athenian demos. Freeman studied Greek federation in the fierce cross-light of our Civil War. In what book, in what single essay, does a thoughtful American, as such, draw a lesson from ancient history, literature, art, or life, in terms intelligible and helpful to patriots and lovers of men now living? Would not even the attempt to do such work be sneered at, in almost every academic faculty, as unscientific dilettanteism?

Many a young man complains that he has toiled faithfully all his student-years over the tasks of the classroom, and never heard raised, much less answered, such a question as: What message has Greece or Rome for ourselves? Sophocles, nearly every Greek professor declares, is the master of dramatic form. Who tells us the purport of the Œdipus or the Antigone? The classics, we have heard from every lip, are absolutely essential to the adequate mastering of an English style. How many of our learned instructors have demonstrated that axiom by a book, an essay, a poem, a line, which gives them even the humblest corner in the most copious cyclopedia of American literature?

But they still repeat that there *are* large and helpful lessons yet to be drawn from Hellenic history, literature, sculpture, and architecture. Evelyn Abbot has a right to say that, in the preface to his stimulating volume of *Hellenica*, or Jowett in putting forth his great translations. A practical but generous people—*our* people—are waiting to see such claims justified in concrete examples and fruitful illustrations. Helpless silence on our side brings growing incredulity, perhaps at last hostile contempt, on the other. Monasticism is dispossessed even in Italy. The mere enjoyment of an incommunicable bliss will find it harder and harder to win or hold, in a workaday modern world, the wherewithal for permanent self-support. If an actual catastrophe befalls, the blame may not rest wholly upon the foe without, nor on the gods who forgot us, but in some part upon the garrison itself.

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VIII

REVIEWS

The pedagogical seminary: an international record of educational literature, institutions, and progress, Vol. III. No. 2.—Edited by G. STANLEY HALL, Ph. D., LL. D., President of Clark University, and Professor of Psychology and Education. Worcester, Mass: J. H. Orpha, 1895. 162 p. $1.50.

This issue of the *Pedagogical seminary*, which appears just a year after its predecessor, is wholly given up to recording the progress of child-study. The editor in his preface renews the statement of his belief that the most fruitful line of advance in education is what he calls the psychological, from within outward, and the several papers that follow are instances of the application of that method. If in some cases they seem merely to reaffirm the indubitable, the reason must be found in the lack of historical and scientific perspective that is the chief weakness of the method followed.

Miss Wiltse brings together a useful summary of the child-study movement in America. She gives due credit to Darwin, Lazarus, and Preyer for their pioneer work, but points out very justly that child-study is, in a peculiar sense, American. Nowhere else has it been pursued so generally and so fruitfully as here; and the credit is due, of course, to the stimulus and direction given by Dr. Hall himself. So great is the present interest in the subject and so numerous are the observations now under way, that it seems hardly possible that Bowditch's initial paper, on the measurements of Boston school-children, was given to the public so recently as 1879. The work of Russell, Hartwell, Burnham, Hancock, Miss Calkins, Miss Wyckoff, Miss Williams, Miss Shinn, Barnes, Parker, Krohn, Baldwin, Porter, Wolfe, and others is appreciatively mentioned. What is now needed is a critical estimate of the work accomplished, and this, it is to be hoped, Miss Wiltse will soon undertake. Once or twice in the present paper Miss Wiltse is unfortunate enough to catch, from her environment, the habit of sneering at points of view that differ from her own. In particular, a sentence near the top of p. 212 betrays a total lack of knowledge of the spirit of Kant and of his contemporary students and expositors.

The second paper is by Miss Holmes of Stanford University, and reports researches based upon the important paper of Burgerstein of Vienna, noticed some time since in this REVIEW,[1] on the fatigue of school-children. The facts reported by Burgerstein are in the main confirmed, but Miss Holmes attributes the cause to fatigue of the power of reproductive association and not primarily to fatigue of the perceptive and motor processes of writing down figures. The tables given are extremely interesting, and they indicate a field in which much may still be done with children of different sexes, ages, social position, and nervous conditions, by varying the tests and including the effects of climate, altitude, time of day, time of year, and so on.

Professor Earl Barnes contributes a discussion on "Punishment as seen by children," and brings out a number of interesting facts, based on answers to questions written by four thousand children. Professor Barnes feels justified in saying that with children justice is largely a matter of feeling; that the majority of children look upon punishment as an atonement they must give for wrong-doing; that children demand a just punishment, and that all wrong-doers shall be treated alike.

The longest paper in this issue of the *Seminary*, and the one that opens up the most fruitful field of study, is that by Mr. Johnson on the "Psychology and pedagogy (*sic*) of feeble-minded children." The paper is in part historical, in part analytic, and in part statistical. A list of the institutions for the feeble-minded, and a bibliography, conclude the essay.

Papers by Ricci on the art of children, by Hancock on the relation of strength to flexibility in the hand, by Wellesley College students on various phases of child-life, by Mrs. Gayley on the classics for children, and some rather slovenly notes on recent literature, make up the rest of a very important and interesting number.

N. M. B.

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[1] IV: 298.

Handbook of English composition—By JAMES MORGAN HART, Professor of Rhetoric and English Philology in Cornell University. Philadelphia: Eldredge & Brother, 1895. 360 p. $1.00.

Paragraph-writing—By FRED N. SCOTT, Ph. D., Assistant Professor of Rhetoric in the University of Michigan, and JOSEPH V. DENNEY, A. B., Professor of Rhetoric in the Ohio State University. Boston: Allyn & Bacon, 1895. 304 p. $1.00.

The disposition to challenge any new text-book of rhetoric is deprecated, in the case of Professor Hart's book, by the very table of contents. Many teachers will rejoice in the chapter devoted to specific and practical instruction in the preparation of a theme, in the almost exclusive use of examples drawn from the books prescribed by the Eastern colleges for entrance examinations in English, and especially in the elaborate analysis of these books (pp. 232–261, Reading and Composition) to show how they may be used as a basis for profitable work in composition. Equally practical, at first view, seems the prominence given to the paragraph by placing the whole discussion of it at the very beginning. But here is involved a question of order which recurs more than once. The table of contents, if it shows the good things I have mentioned, shows also a classification not only original, but also illogical. The division of Part II, for instance, into chapters headed respectively clearness, force, propriety, and figurative expression, is confusing. Doubtless the confusion is due to the difficulty of reaching any logical classification where the scope is so extended. For this new handbook of English composition is found to be the old *mélange* of composition, prosody, linguistics, and criticism, which teachers are more and more agreeing to discard. It may be that such straddling—one foot in the school, the other in the college—will continue until school work is more carefully adjusted to college work; but surely new text-books of composition can no longer call themselves practical when for a real difficulty they have only an evasion.

So much for the old bottles. The new wine needs closer scrutiny. Part I, under the general heading *invention* (a term, we had supposed, happily obsolescent), discusses the paragraph (pp. 5–12) under the headings *unity*, *sequence*, *selection*, *proportion*, *variety*, and thus yields at the outset to two temptations as old as English rhetoric—the tendency to introduce new terms and the tendency to confuse classifications. The first appears again in "paragraph centers" (§ 12), in "generalized narration" (§ 34), in the use of Genung's term "dynamic description" in a sense different from Genung's (§ 43), and in other cases equally important. The second is more serious because it involves a defect in logic from which, as has already been hinted, the book suffers throughout. Thus (p. 44) the general principles of narration are set down as *unity*, *interest*, and *sequence* (compare the division of the first chapter on the paragraph noted above). Thus we hear (§ 35) that "History and biography are usually treated under narration. This is neither practical nor philosophical. They are not forms of writing, but forms of literature. They may comprise, not only narrative and description, but exposition, argument, persuasion, science, philosophy, art, and many other branches of knowledge."

Moreover, the discussion of "the paragraph in general" lacks point and conciseness. It is nowhere explicitly stated that the test of paragraph unity is commonly the possibility of reduction to a single sentence. Paragraph sequence is confused with paragraph proportion (§ 5), and separated from the discussion of connectives (§ 9) and of "the paragraph echo" (§ 8); and these latter most practical matters are further confused by the misuse of the third example on p. 16 and of the second on p. 17. *Proportion* is anticipated under *sequence* (p. 11), dismissed (p. 12) with the statement that "no rule can be given," and resumed, under other headings (pp. 18, 21–22, 23). If the so-called principle of *selection* (p. 11) is set forth most vaguely, that is doubtless because it is not a distinct category, being only one phase of the principle of unity; but the same excuse cannot be made for comments like the following (under the "Paragraph in narration and description"): "The sentence here italicized is conspicuous by introducing the moral element into a scene of horror" (p. 21).

In the following chapter, on the "independent or isolated paragraph," the results of the excellent work of Professors Scott and Denney are presented simply and concisely. Chapter iv, on connected or related paragraphs, though much clearer than chapter ii in the statement of principles, is weak in the statistical conclusions. The remark applies, though in a lesser degree, to chapter xv. If this aspect were to be discussed at all, reference should have been made to Professor Sherman's *Analytics of literature*, and to Dr. Lewis's dissertation on the *History of the English paragraph*.

Throughout these earlier chapters the paragraph doctrine is applied briefly to the various kinds of writing. These are then taken up singly in the following chapters. Under Narration the sub-headings make the reader wonder afresh for whom the book is intended. Description is better, though Lessing is strong meat for schools, and the new terms are not illuminative. Exposition follows Genung in the main. In the anxiety to avoid the terms of formal logic the author has weakened his discussion of division, and has run into such vague headings as "general phenomenon," "general relation," "general ideal." The student is not likely to be helped by the reflection (§ 56), under "general law," that "in human affairs—politics, history, ethics, literature, etc.—it is far more difficult to formulate general laws." Argumentation is discussed without fear of accepted terms, but without adequate recognition of the practical application embodied in the Harvard forensics, and specially in the published work of Mr. G. P. Baker. The table of special terms and the practical suggestions are good; not so the ignoring of that most important instrument in the development of logical writing—the brief.

Part II (*Expression*) may be dismissed the more briefly as it beats over old ground. "Force" is not sufficiently distinguished from "propriety," and propriety sometimes leans toward pedantry. "If the verb *to telegraph* . . . has become good English only in the last thirty or forty years, it is hard to see why *to cable* . . . should not be equally recognized. It meets a practical demand. But there is less need of *to wire;* it is merely a doublet of *to telegraph*." "*To suicide* and *to duel* are still rejected by the fastidious, with a possible chance of acceptance. *To burglarize* has no such chance." "*Shan't* and *won't* are not permissible at all" (pp. 165, 166). Without discussing the soundness of such statements, it must be urged that the attitude makes the author fair game for those who still cry out against the rules made by rhetoricians. Moreover, a writer who is fond of using *also* as an introductory particle cannot with good grace warn "the young" not to begin sentences with *but* (p. 149); and the use of "longs" (§ 153), for long paragraphs weaken many other exhortations to propriety.

Part III (*Some practical features of composition*) has been already commended. Part IV deals with poetry, meter, oratory and debate, and the history of the English language, giving one chapter to each. If one could forget that these eighty pages are irrelevant, he should see that the chapter on meter is, in the main, refreshingly sound, and that the chapter on the history of the language is not only sound—the author's name is a guarantee of that—but also concise and well applied. The other chapters are perfunctory. The book is well printed, and bound in the approved style of twenty-five years ago.

The new edition of the modest *Paragraph-writing* of Professors Scott and Denney should bring this excellent monograph into much wider circulation. The authors have added an appendix, applying, in the practical way that made their previous work so welcome, the principles of the paragraph to the sentence. With this addition the book is a sufficient manual for the first year in college, or for corresponding classes in academies. For teachers it is even more valuable, because of its wealth of practical suggestion.

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Roman life in Latin prose and verse—Illustrative readings from Latin literature. Selected and edited by HARRY THURSTON PECK and ROBERT ARROWSMITH. New York : American Book Co., 1895. 256 p. $1.50.

This fascinating volume contains in twenty-nine chapters a number of characteristic selections from the best-known Latin authors, arranged chronologically, together with a few of the popular songs, some inscriptions from Rome and Pompeii, and a trio of Christian hymns, including the *Dies Iræ*.

The authors whose names appear are Ennius, Plautus, Cato, Lucretius, Catullus, Cæsar, Syrus, Cicero, Vergil, Mæcenas, Horace, Ovid, Livy, Petronius, Pliny the Elder and the Younger, Quintilian, Martial, Juvenal, Gaius, Tacitus, Suetonius, Hadrian, and Gellius; also the *Testamentum Porcelli*. The selections are all complete in themselves, and carefully chosen. At the beginning of each chapter there is a slight sketch of the author, a statement of his principal works, and his place in Latin literature, and an indication of the most important editions. In the appropriate places are illustrations drawn from ancient and modern sources, and explanatory notes fill the latter part of the volume.

We have, accordingly, a concise sketch of Latin literature with glimpses of the most characteristic writings of each author, and we have at the same time a collection of "literary gems," which shine the more brilliantly that they are put in contrast with each other.

With the majority of our youth who study Latin in the secondary schools, the language remains to them merely a linguistic vehicle, not a literary creation. Unable to proceed further into collegiate or university study, they never catch sight of the large literature beyond the narrow circle of Cæsar, Cicero, and Vergil, which the Latin language embodies, and a knowledge of which is essential for a proper appreciation of English. Their small smattering of a few authors soon leaves them, and Latin becomes a memory, always vague and often unpleasant.

Such a book as this is a long stride in the direction of meeting the wants of just such students. After the dull round of preparatory drill and translation is finished, the last year of the secondary school could be in no way more profitably spent than in reading these selections.

What could be more interesting or more inspiring than Lucretius' account of the "Early Days of the World," or Pliny's letters on the "Eruption of Vesuvius" and the "Persecution of the Christians"? than Vergil's "Descent into Hell," or Juvenal's description of "City Life at Rome?" What more thrilling than Horatius at the Bridge, or Calgacus' speech to his British warriors? While, for the more reflective minds, Vergil and Horace offer abundant material.

It is for this large class of students, who can devote but a limited amount of time to study, that the book is primarily intended; and for them it is admirably adapted. With the wide range in selection there is the opportunity for observing all varieties of style, the difficult and the easy, the serious and the light, and the careful editing supplies the necessary help at every point.

The editors have intended "also to provide for schools and college classes, in the sight reading of Latin, a wider, more interesting, and more instructive course than is offered by any existing volume designed for rapid reading." If by sight reading is meant the hasty skimming over of large masses of Latin, such as is too often made an object in modern instruction, this book is not available. The fact that it combines both difficult and easy authors makes it unsuitable for careless reading; while its nature, as a collection of "gems," renders such treatment deplorable. Many of the selections should be almost wholly committed to memory and made a part of one's permanent literary possession, and all deserve repeated reading by an appreciative student. Hence, if the book is read at sight, it deserves careful and thorough treatment—that treatment which makes sight translation no less severe and accurate than the translation of prepared passages, and which is being more and more required for the entrance examinations of our various colleges. For such study it is both available and valuable.

GONZALEZ LODGE

BRYN MAWR COLLEGE

Maria Stuart. Ein Trauerspiel von Friedrich Schiller—Edited with introduction and notes by EDWARD S. JOYNES, M. A., Professor in South Carolina College. New York: Henry Holt & Company, 1895. xli + 226 p. Price 60c.

Whitney's German texts were pioneers, and in their day were so admirable that every scholar will be glad to know of the publishers' intention to revise them and render them equal to the more manifold and exacting demands of the present Accordingly the edition of *Maria Stuart* in this series has been revised, remodeled, and enriched by its original editor, Professor Joynes. The result is a more useful and in its way a delightful work, yet one not quite in accord with the methods of modern scholarship. With the fresh stimulus of such an edition as Breul's, the present editor might have been expected to do better. The present work simply fails to recognize the distinction, in our day more and more clearly made, between *belles lettres* and literature. Professor Joynes, with his varied information,—not precisely scholarly, if not inaccurate,—with his keen appreciation and fine taste, and with his long and successful experience as a teacher, represents the old-school ideal of culture as a possession and an ornament rather than as an activity and a principle of conduct. If we keep this fact in mind, as it is certainly due to the veteran teacher and editor that we should, we can understand this edition and recognize its value. The sketch of Schiller's life is prismatic; it does not give the student a just and clear view of the poet; it does not inform him so that the eulogies quoted from Carlyle will appear to him less than overwrought. The introduction is a much more satisfactory piece of work, perhaps because one does not require or expect the sustained treatment that is missed in the biographical sketch. It will be read with interest before and after the play; what it lacks in careful exposition being supplied by the urbane suggestiveness of a *salon* essay. There are seventy pages of notes; a concise account of each scene precedes the annotation proper; cross-references, comment, and illustrations from general literature are frequent. The notes are in general well conceived; but their method is too often that of offhand comment, which in the classroom may be justified by the author's well-known charm of manner, but ought not, in justice to himself, be put into type. See, for instance, the notes on ll. 33, 1503; and the etymology of *Ressort* suggested in the note on 15* ought to have been clearly indicated. *Sultanslaunen* in l. 775 is perfectly clear. Why translate it, why above all misinterpret it, "sultanic (despotic) humors"? *Cf.* especially herewith notes on 2376 and on 2432! The appendixes give the original stage version of the confessional scene (Act V. sc. 7), and a genealogical table. There is no index. The publishers have inserted well-selected portraits, reproduced by process, of the poet and his two queens. The presswork of the book is good. But the proof might have been more carefully read; *geänstigt* in l. 210 and *das* (for *dass*) in l. 477 might easily puzzle a young student. The text looks as if it had been printed from forms not sufficiently tightened; almost every page shows broken and spreading lines. In fine, this edition is neither the definitive school edition of *Maria Stuart*, nor indeed a truly satisfactory piece of work, and yet it is far too good to be either condemned outright or damned with faint praise.

GUIDO H. STEMPEL

INDIANA UNIVERSITY

Arithmetic for schools—By CHAS. SMITH, M. A., Master of Sidney Sussex College, Cambridge. Rewritten and revised by CHAS. L. HARRINGTON, Head Master of Dr. Sachs's School for Boys, New York. New York: Macmillan & Co., 1895. 329 p. 90 cents.

Algebra for beginners—By H. S. HALL and S. R. KNIGHT. Revised and adapted to American Schools by FRANK L. SEVENOAK, A. M., M. D., Professor of Mathematics and Assistant Principal in the Stevens School. New York: Macmillan & Co., 1895. 188 p. 60 cents.

Elementary algebra—By H. S. HALL and S. R. KNIGHT. Revised by FRANK L. SEVENOAK. New York: Macmillan & Co., 1895. 478 p. $1.10.

It is hardly fair to expect that a text-book which is English, at least in its inception, should have profited by the suggestions contained in the Reports of the Committees of Ten and Fifteen, but the opinions of certain educational reformers have been shaping the character of mathematical teaching so long, that the average American teacher naturally turns to their embodiment in these reports as his standard. To those who are looking for a concrete expression of these reports in the form of the ideal text-book, the *Arithmetic for schools* will be disappointing; while those who hold to the idea that a scientific arrangement of topics, as opposed to the concentric or spiral plan, is the more desirable, cannot fail to approve of the book. A remark in the preface implies that the compilers expect the Arithmetic to be of service in preparatory schools. Owing to the exhaustive treatment of many of the topics and the close reasoning employed in establishing many of the principles, the book will necessarily be restricted in its use to the grades not lower than the high school. While it is rich in illustration and suggestion of material device in some of the topics, the student is plunged into the difficulties of the decimal fraction at the outset, with little to build up in his mind a clear conception of the division of the unit. The complex operations of multiplication and division of decimals may have a logical connection with the corresponding operation in whole numbers, but their introduction before the common fraction reverses the application of the principle, "From the easy to the difficult." Whatever may have been the experience of the individual teacher in the introduction of the decimal fraction before the common, the mass of opinion is against it. The matter cannot be more cogently expressed than in the words of Dr. Harris: "The want of a psychological analysis of these processes has led many good teachers to attempt decimal fractions before taking up common fractions. In the end they have been forced to make introductory steps to aid the pupils, and in these steps to introduce the theory of the common fraction. They have by this refuted their own theory." The treatment of the common fraction, is, in general, excellent. The strong points are in the arrangement of the figure work, and in the development of the principles as they seem to be necessary. I should take exception to the logic in the demonstration under Art. 121, where the use of the principle of dividing a fraction by multiplying its denominator precedes its development in the following article.

While there has been no agreement among mathematicians as to the interpretation of such expressions as $36 \div 6 \times 3$, it would settle a question to let it accord with the laws of literal notation. If the expression were generalized into $a \div b \times c$ there would be no division of opinion respecting the order of the signs, but that of multiplication would be preferred, no matter what the written order might be. The value of the above expression would therefore be 2, and not 18 as given under Art. 127.

So much may be said in praise of the treatment of areas and volumes that its few defects might be justly overlooked. In examples and model solutions one may see so many violations of a principle of multiplication, well demonstrated at the beginning, that the student will fail to realize its importance.

With respect to a sequence of topics, as much may be said in favor of making percentage a form of ratio (Art. 216) as in relating it with corresponding processes in common and decimal fractions, but the forms of notation generally employed eventually base it upon the fraction. Since the solution should be the index of thought, nothing is gained in relating the percentage with a derived process at the outset, to say nothing of a consequent tardy introduction of a topic whose principles are necessary to all forms of business. The practical treatment of business arithmetic, however, is one of the commendable features. The various business forms, the well selected applications, are suggestive of utility besides adding to the typographical appearance of the book.

In the *Algebra for beginners* one finds a book containing the ordinary processes of algebra, designed as a preparation for a more systematic study of the subject in the *Elementary algebra.* While in matter and in demonstration it does not differ essentially from other text-books of the same grade, by approximating a spiral plan in the arrangement of topics it is a departure from the conventional algebra. In this respect alone it will commend itself to all who believe in the power of the mind to concentrate itself upon details as the subject progresses. To this end the difficulties encountered in the more rigorous demonstrations of H. C. D. and L. C. M., the factoring of compound expressions, the simplifying of complex fractions, are reserved until after many of the fundamental operations of the subject have been considered.

Of adverse criticism there is not much to be made. There are some instances of a dogmatic statement of rules, which should be derived inductively as in fractions, of placing the more general demonstration before the particular, as in explaining the law of signs in multiplication. The early introduction of fractional and negative exponents may also be considered a fault in arrangement. The slighting attention accorded to radicals is an insufficient preparation for the solution of radical equations in a subsequent chapter.

The increasing demands of colleges and schools of science are given as a reason for the revision of a former edition of the *Elementary algebra;* hence a more comprehensive treatise than is usually included under that title is found in the present edition. To those who are familiar with the first edition, it is sufficient to say that the same thoroughness in the discussion of principles and regard to continuity of thought characterizes the new edition. The importance of training the pupil to correct methods of reasoning is prominent throughout. In consequence the book may be best appreciated by those who regard the discipline arising from processes of reasoning of more importance than that which comes from mechanical operations. It is, however, too well furnished with carefully selected exercises to make this a point of criticism.

As the *Elementary algebra* presupposes a preparation upon what is contained in the *Algebra for beginners* or its equivalent, the subject is addressed to a class of students who can follow a rigorous demonstration of principles. From this standpoint it will be difficult to find a more adequate treatment of the Theory of Indices or a more logical connection with the subject of Radicals.

It is not within the limits of this review to do more than call attention to the merits of additional chapters, particularly those of determinants and the theory of equations.

I congratulate the authors upon the revision and venture to predict that it will be widely used.

FRANK H. SCOBEY

STATE NORMAL SCHOOL,
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Irving's Tales of a traveler—With introduction by Professor BRANDER MATTHEWS of Columbia College and notes by Professor GEORGE RICE CARPENTER of Columbia College. New York: Longmans, Green & Co., 1895. 408 p. Introductory price, 75 cents.

George Eliot's Silas Marner—Edited by Professor ROBERT HERRICK of the University of Chicago. New York: Longmans, Green & Co., 1895. 223 p. Introductory price, 58 cents.

Defoe's History of the plague in London—Edited by Professor GEORGE RICE CARPENTER of Columbia College. New York: Longmans, Green & Co., 1895. 253 p. Introductory price, 58 cents.

The recommendations of the Conference on entrance examinations in English, as agreed upon in Philadelphia May 19, 1894, have already been adopted by many of the leading colleges of the country, and there will be hereafter substantial uniformity in the subject-matter at least of these college entrance examinations so far as English is concerned. The literature which is to be made the basis of the examinations being thus definitely known, we may expect many annotated editions of the English classics which have been thus recommended by the Conference and adopted by the colleges. The three volumes above named are the first issues of a series to be edited by Professor Carpenter of Columbia College.

The report of the Conference recommends certain English classics for *reading*, and certain others for *study*. The three volumes under consideration are included among those to be *read*. The editor, therefore, aims by his treatment of these books to interest young students in them "as literature" and not as texts for "merely linguistic study." He, however, aims to supply incentives to further reading and study by means of explanatory notes, critical introductions, and glimpses into philological realms of thought. The volumes which have been suggested for "study" by the Conference will doubtless receive a more detailed critical treatment, which would be unwelcome in this literature intended for pleasurable "reading."

The introduction to Irving's *Tales of a traveler* is by Professor Brander Matthews, and describes succinctly the main events of Irving's life and the characteristics of this book. The notes are by Professor Carpenter, and give helpful explanation of allusions in the text which would be obscure to young readers.

In his introduction to *Silas Marner* Professor Herrick makes the biographical details of George Eliot's life reveal the development of her power as a novelist and explain the change that came over the spirit of her later work. He speaks of the difference between the fresh, spontaneous spirit of her early novels and the more labored and learned nature of her later, more ambitious work. The young reader of this introduction will surely here catch a glimpse at least of a point of view so essential in scholarly, literary exposition, viz., the importance of a *chronological* study of an author's work. If the significance of this suggestive point of view, as given by Professor Herrick, be emphasized by the teacher, the young reader may now begin to distinguish in all his reading between the early work of the youthful poet, whose *Weltanschauung* was an emotion rather than a thought, and the matured view of life, the chastened judgment of the silver-haired sage. No longer will Milton be to him equally Milton, whether the lines be a portion of a rhetorical exercise done within college walls, or the majestic music of the blind old seer who had taken part in the great struggle for liberty of thought and liberty of unlicensed printing and who is now attempting to "justify the ways of God to man." The later works, the Locksley Halls Sixty Years After, may possibly be less poetical in spite of their greater weight of thought. The important thing is that the pupil be taught to form a habit of observing the chronology of an author's works and of thus understanding the development of the author's spirit. It is a commendable feature of Professor Herrick's introduction that this point of view is suggested to young readers in his discussion of the difference between the earlier and the later work of George Eliot.

In view of the reputation of the men who composed the Conference whose selections are under consideration, a criticism of their choice of selections should be made in all modesty, if at all. And yet I cannot refrain from an expression of surprise that that grewsome thing, Defoe's *History of the plague in London*, based upon "a collection of the bills of mortality for 1665," should have been assigned as *required* reading for the high-strung, nervously inclined American maiden preparing for college, making thereafter her nights hideous, and each particular hair to stand on end, freezing her young blood and murdering sleep so that not poppy, nor mandragora, nor all the drowsy syrups of the world shall ever medicine her to that sweet sleep which she ow'dst before she was required to pass through this morgue on her way to college; an experience which, as Professor Carpenter truly says, will stimulate her imagination with "a series of pictures," "scarcely to be effaced from the memory." 'Tis true, 'tis pity, and pity 'tis 'tis true, that these accounts of inhuman cruelty will "remain with us for years as vivid as the actual recollections of our childhood."

However, if it was worth doing at all—and since it was on the list it had to be done—it was worth doing well, and this Professor Carpenter has done. He gives an interesting biography of Defoe, an account of his works, a discussion of their ethical influence (including that of this "somewhat sensational" novel), some suggestions to teachers and students, and a list of references for further study. This is all valuable and suggestive. The reader wishes that there were more of it. Indeed, the criticism I was about to offer on this series is perhaps their chief excellence. One wishes that the introductions were longer and more exhaustive. For contrary to custom, as expressed in Gratiano's query, "who riseth from a feast with that keen appetite that he sits down?" the young student will doubless finish these introductions hungering for more. And this, perhaps, was the editor's object in view, viz., that the introductory and explanatory matter should be suggestive and stimulating rather than complete and exhaustive.

RICHARD JONES

SWARTHMORE COLLEGE

The Werner Primer for beginners in reading—By F. LILLIAN TAYLOR. Chicago and New York: The Werner Company, 1895. 112 p. 30 cents.

The Werner Primer is a book handsome in appearance. Its script and print are triumphs of the printer's art, and its colored illustrations are beautiful. It contains or suggests many devices for the classroom that are of value. Notwithstanding these merits, it is impracticable as a school reader.

Through the reading lesson, the author proposes to teach color, form, language, and number. Hence the reading matter is scrappy, uninteresting, and inadequate. It is a good example of concentration run wild. When that doctrine, more maligned by its advocates than by its opponents, is made the basis of an attempt to teach half a dozen things at once, as is the case in this book, it results in a method that is artificial and dangerous because it is unnatural. One thing at a time is all that can be attended to by the mature mind; should we expect more of the child-mind? The using of the mental products of one lesson, or of one study, as the apperceptive stuff in another lesson is a wholly different kind of concentration, but it is not the kind aimed at in this book.

Of the 112 pages, 53 pages are devoted to instructions to teachers, to pictures, to columns of words (often one word repeated a number of times), songs and stories that are not to be used as reading matter, and to devices for teaching color, number, stick-laying, etc. Only 59 pages remain for sentence work, and these pages contain only 156 separate words. Perhaps, however, the most ridiculous thing in the book is the attempt to teach phonic analysis on a single page (p. 36). How the words introduced before p. 36 are to be taught, the author does not deign to tell us; after that page, no further use is made of phonics. In her anxiety to teach so many things at once, the author loses sight of the object of the book—to teach reading. In attempting to teach these other things through the reading lesson, she does not teach so much of them, nor does she teach them so well, as they are generally taught, when taught separately in the first instance, in well-managed schools. She has made a pretty book, but a poor primer.

WILLIAM H. MAXWELL

SUPERINTENDENT OF PUBLIC INSTRUCTION,
BROOKLYN, N. Y.

IX

EDITORIAL

The law passed by the last legislature of the State of New York to encourage and promote the professional training of teachers, requires that after January 1, 1897, no person shall be licensed or employed to teach in the primary or grammar schools in cities, who has not had successful experience in teaching for at least three years, or, in lieu thereof, has not completed a three years' course in and graduated from a high school or academy having a course of study of not less than three years, approved by the State Superintendent of Public Instruction, or from some institution of learning of equal or higher rank, approved by the same authority, and who, subsequently to such graduation, has not graduated from a school or class for the professional training of teachers, having a course of study of not less than thirty-eight weeks, approved by the State Superintendent of Public Instruction. At the recent meeting of the State Council of Superintendents, held at Newburgh, N. Y., the chief subject of discussion was the course of study that should be maintained in high schools or institutions of equal rank in order to meet the approval of the State Superintendent as required by this law. A committee, consisting of Superintendents Maxwell of Brooklyn, Blodgett of Syracuse, Cole of Albany, Whitney of Ogdensburgh, and Griffith of Utica, was appointed to consider and report upon the subject. The report of this committee, which was adopted with practical unanimity after an animated discussion, is as follows:

I. A three-years' course of study in a high school, in order to receive the approval of the State Superintendent of Public Instruction, as required by chapter 1031 of the laws of 1895, entitled, "An Act to encourage and promote the professional training of teachers," should include the following as a minimum requirement:

1. English, three years, or three hundred recitations. The English course should include grammar, rhetoric, literature, and composition. The work in literature should cover at least the ground required for admission to college by the Association of Schools and Colleges of the Middle States and Maryland.

2. Mathematics, three years, or three hundred recitations. The mathematical course should include algebra to the end of quadratic equations, plane geometry, and a review of arithmetic.

3. A foreign language, Latin, French, or German, three years, or three hundred recitations. The course should include at least the grammar of the language and translation at sight of simple prose and poetry into idiomatic English.

4. History and civics, three years or two hundred recitations. The course should include English, Greek, and Roman history, with the intensive study for at least five months of civics and some special period of American history.

5. Drawing, three years, or two hundred recitations. The course in drawing should include the principles and practice of representation drawing, construction drawing, and decoration drawing.

6. Physics and botany, with individual laboratory work, two years, or two hundred recitations. Chemistry directly applicable to physics and botany should be taught in connection with these subjects.

7. Physiology and zoology, one year, or one hundred recitations.

8. Geography, physical and mathematical, one year, or one hundred recitations.

9. Vocal music, three years, or one hundred recitations. The course should include vocal culture (in class), sight singing from the staff, and the common technical terms used in vocal music.

Four- or five-year courses in high schools or courses in institutions of higher rank, should include the subjects required in the three-years' course.

II. Whatever examination in scholarship may be required for a teacher's license should be conducted before the applicant enters upon a course of professional training, and not after its close.

III. Your committee desire to express most emphatically their opinion that the State normal schools should not admit to their professional courses anyone who has not completed a scholastic course at least equivalent to the three years' high-school course set forth in this report.

Superintendent Skinner has embodied this report in a circular which he has sent to all school officers in the State, thus approving it and, in fact, making it his own.

While it will be at once admitted that there is nothing in the report quoted in the last paragraph that is not already to be found in many of our best high schools, yet it is also well-known that the majority of high schools and academies in New York do not as yet comply with all the conditions laid down. In some schools a foreign language is excluded from the so-called English course; in others there is no laboratory work in science; in others the baleful practice of introducing all the sciences and giving only a few weeks to each is still maintained; in others neither music nor drawing is taught. The object of this report is to set a minimum standard to which all secondary schools, private as well as public, must conform if their graduates are to be admitted to the profession of teaching. The lever thus placed in the hands of the State Superintendent, to raise the standard of secondary education in the Empire State, is one of incalculable power. Any school may, of course, go beyond, but all schools must at least comply with the requirements of the report.

These minimum requirements, which follow very closely the recommendations of the Committee of Ten, seem destined not only to reform the curriculums of secondary schools, but to modify in a most important respect the method of admission to the teaching profession. Hitherto, in certificating teachers, emphasis has been laid on passing an examination in scholarship; hereafter, the emphasis is to be laid, not on the examination, but on the course of training. Without such a law as has been placed on the New York statute book, superintendents charged with the duty of licensing teachers have no alternative but to employ the examination. It is the only means by which the favorites of politicians may be restrained from overrunning the schools. But it brings with it a train of evils peculiarly its own. The examination inevitably induces cramming. Applicants who are anxious to enter the teaching service are not content, in many cases, to undergo the intellectual discipline required by a good high school. They prepare directly, under tutors, for the superintendent's examination. Preparation of this kind, in nine cases out of ten, means the studying of answers to questions previously set; knowledge that is fragmentary, unassimilated, and easily forgotten; and a positive distaste for serious and continued mental effort. Teachers who have learned in this way teach in this way. The cramming for examinations on the part of teachers is responsible for much of the poor teaching in the elementary schools. Thorough scholastic training for teachers, on the other hand, is the most powerful antagonist of evil methods of teaching.

State Superintendent Skinner will miss a splendid opportunity if he does not apply the recommendations of the State

Council to the State Normal Schools as well as to the secondary schools. It is quite within the province of his authority to apply them also to the State Normal Schools. These institutions cost the tax-payers somewhat over a quarter of a million of dollars every year. They have been of enormous benefit to the public schools, but still the complaint is heard on all sides that many of their graduates are not well grounded in the subject-matter of their studies; in short, that they are deficient in scholarship and in intellectual training. Hereafter, there would seem to be no good reason for permitting a lower standard of scholarship in the State Normal Schools than that required for entrance to city training schools.

The New York State Council of Superintendents has unanimously indorsed the position taken by State Superintendent Skinner in opposition to the so-called "temperance" law passed at the last session of the State legislature. The opposition to this law, be it understood, is not opposition to the teaching of temperance, but to dictation by the legislature as to how temperance or any other subject shall be taught in the schools.

The legislature never has existed, and probably never will exist, that would be competent to prescribe methods of teaching. The prescription by law of methods of teaching is a blow at the liberty of the teacher and a menace to the efficiency of the public-school system. China adopted this method of administering her schools some thousands of years ago. The result has been the stagnation of the Chinese intellect for an equal number of years. The New York temperance law is the first step toward the adoption of Chinese methods. The demand for its repeal ought to be irresistible.

Not only the teachers of New York State, but the men of science and the physicians are up in arms about this law that the temperance fanatics got passed last winter, compelling the teaching of physiology and hygiene, with particular reference to alcoholics and narcotics, in all the schools of the State. Dr. Hopkins, professor of hygiene in the University of Buffalo, recently read an important paper on the subject before the Buffalo Academy of Medicine, and had no difficulty in showing that the projectors of the law insist on having a mass of misrepresentations and falsehoods taught to the children in the name of physiology and hygiene.

Dr. Hopkins called attention to the fact that neither the medical profession, represented by three State organizations, nor the State Board of Health, were consulted as to the passage of the law, and that the educational authorities opposed it unanimously. He very properly inferred that these facts point to the conclusion that the promoters of the law were not willing to trust to professional criticism of their measure. From the Buffalo high school Dr. Hopkins obtained a copy of the text-book then in use, "edited and endorsed for the use of schools by the department of scientific temperance instruction of the Women's Christian Temperance Union of the United States, under the direction of Mrs. Mary H. Hunt, superintendent." The value of the "edited and endorsed" will become apparent in a moment. Of the book in general, Dr. Hopkins says: "The figures presented by drawings and text do not belong to the human species or to any other family of the animal kingdom."

He then proceeds to make extracts from this "edited and endorsed" text-book, and shows that its statements regarding the physiological effect of alcohol are flatly contradicted by the authoritative literature of physiology. Dr. Hopkins's conclusions are these:

> Regarding the text-book produced by our alleged promoters of scientific temperance, it may be said that there is but slight relation between title and subject-matter. Professing to instruct innocent and helpless children upon the effects of alcoholic drinks, it gives a lurid and hysterical dissertation, in language almost vulgar, upon absolute anhydrous alcohol, a substance known only to the chemist, and then only as a rare chemical curiosity. As a whole, nothing could be more misleading, misrepresenting, and language can scarcely be more immoral.
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> The fundamental conception of this law is an offense against science, in that it proposes, in the name of science, to store the mind with facts of a kind the mind is utterly unable to receive, arrange, digest, and assimilate, and that the result must be either waste of time and effort on the part of the child and teacher, or the lodgment in the mind of the child of a brood of half-truths, partial truths, distorted truths, certain to stunt the mind, to deform the mold of thought, to produce a pseudo-scientist, the most helpless, hopeless, intractable, incorrigible citizen with which we may burden the State.

The official report of the Convocation of the University of the State of New York, held in June last, has just been published. No such complete record of the sayings and doings at an educational meeting exists elsewhere, and to read the lively debates reported here is only a little less interesting them to hear them.

Not only was the Convocation of 1895 the best attended—468 actual members having attended—but the discussions were less academic and formal than usual. This was in large part due to President Eliot, who entered with zest into the debate on secondary-school problems. His address was an argument for three reforms: (1) The abolition of the break or division between elementary and secondary schools; (2) the introduction into the grammar-schools of the subjects which belong to the age of grammar-school children; and (3) the introduction of the departmental system of teaching. As usual, Mr. Eliot's facts were marshaled with great force, and his logic was very convincing. He called attention to the fact that the Report of the Committee of Fifteen discussed the distinction between elementary and secondary studies. "Read the report with utmost care," continued Mr. Eliot, "and you will not discern a single essential difference between elementary-school studies and secondary-school studies. . . We have all been misled about that for generations. We have imagined that there was a distinction that did not exist. The difference is all in the state of mind, or stage of development, of the pupil." In speaking of the departmental system of teaching, Mr. Eliot declared that he had yet to hear of a single school into which it had been introduced where it had not been a conspicuous success from the first year. He insisted, too, that there is no loss of personal contact and influence under the departmental system, but rather gain. This point has been much dwelt upon by opponents of departmental teaching, among them practical administrators like Mr. Fitzpatrick, and teachers who fear some loss of power in building character, like Colonel Parker and the Herbartians. We feel quite sure that their apprehensions are groundless, and are glad to have the weight of Mr. Eliot's testimony on that side.

Mr. Eliot was called upon again when the elective system was under discussion, and administered a dose of facts as a cure for the "highly theoretical views of most of the speakers," in a most refreshing way. The stock objections as to easy courses, care of the individual student, undue popularity of the sciences, neglect of English, and so on, were refuted with the ease that is born of knowledge and experience.

Another discussion of more than usual interest was upon "The present trend in pedagogy"—awful word! No wonder that President Milne, who has a sense of humor, rode a tilt at it. But President Hall took the matter very seriously, and before it ended the debate was a warm one.

The event of the month is the publication in England of the report of the Royal Commission on Secondary Education. The London educational journals give an outline of it in their issues for November. As Dr. Fitch is to write fully upon the subject in the next issue of this REVIEW, it is sufficient at present to say that while the recommendations of the report are acknowledged to be a compromise, they are very favorably received. The *Educational Times* says that "No commission has ever done so much in the same time, or done it more thoroughly, or set forth its conclusions with greater force and lucidity."

In the *Journal of Education*, the weightiest educational publication in England, Dr. Storr pronounces it "a comprehensive, judicial, and statesmanlike document." As a result of the report, it is believed that in 1897, at the latest, a bill organizing secondary education on the lines recommended will be presented to Parliament. The report is unanimous, a conclusion that was at one time supposed to be quite out of the question. A minister of education is recommended; also, a central council on which teachers are to be represented. The registration and training of teachers are also part of the plan.

The same issue of the *Educational Times* reports a very amusing lecture before the College of Preceptors, by Dr. Wormell, himself a member of the Commission. His description of the Commission and its methods is most entertaining. Mr. Bryce's many American friends will certainly enjoy this description of him:

> First and foremost, greatest and most gifted, there is the chairman. The unwritten stories and anecdotes which emanate from the universities

respecting their leading men generally have a few grains of truth at their base. Mr. Bryce has had his share of these myths, and we who are teachers know him better for them, and, probably, respect him the more. Always keen and clear, and apparently absolutely proof against fatigue, he makes a marvelous chairman. Few men have a greater power of incisive expression. When he had grasped a point and expressed it in his own way, it was wonderful how clear the point became. And when he could not or would not understand, and when he quite misunderstood, the negative and the positive misunderstanding were expressed with equal lucidity. His tact is shown by the fact that, although it seemed at one time as if there would be appended to the main report seventeen minority reports on particular points, and although nearly all, including the chairman himself, had threatened at one time or other to decline to accept a particular conclusion of the majority, yet in the end the report was signed without a dissentient voice; it was a perfectly unanimous report. His patience in endeavoring to bring about a delicate adjustment of apparently conflicting or irreconcilable views seemed inexhaustible. Equally inexhaustible was his cheerful humor. But he had an aphorism or saying for both sides of every question. For example, the phrase "harmonizing ideals" had somehow cropped up in a draft, and someone asked what it meant—what were ideals? Promptly the chairman replied: "Ideals are the concrete forms which ideas would take if they were brought into existence." This effort at definition seemed so successful that two minutes later some other member tried his skill at definitions, and the chairman remarked: "It is a legal maxim that all definitions are dangerous." I never before saw such versatility as was possessed by the chairman. He would state a case with arguments *pro* and *con*, would receive dispatches and write official replies, and re-enter the discussion as if his attention had never been diverted. He would beg to be excused for a short time to attend a Cabinet Council, and quietly returning, would grasp all that had been done in his absence and resume the lead. Can we conceive a better chairman?

I once dined at the table of a minister of public instruction in France. The minister told me he was proud of having once been a common schoolmaster, and asked me how long it would be before such a phenomenon would be possible in England. When the course is clear and continuous from the mastership of a common school to the ministership of education or chairmanship of a Royal Commission, we may find qualities of sympathy, appreciation, knowledge, as regards the work of teaching, which have not yet been encountered in these connections. The late Master of Balliol remarked in one of his sermons: "Some persons may never have understood that teaching has anything to do with sympathy; that the young have to be educated through the heart as well as the head." The Master was right. The chairman had his own way of reasoning and of dealing with a subject. His intellect had apparently been nourished on deductive philosophy rather than on the methods of scientific inquiry. I believe, for instance, if he had to deal with chemistry, he would banish the sixty-seven elements altogether, and deal with the whole business on a theory of affinities. I found that my methods were not his. The preliminary examination of facts and actual cases, which to me was always essential to the feeling of safety in reasoning, seemed to him an unnecessary waste of time. This was often embarrassing, but it shows what I am now putting before you, namely, the great variety in the elements composing this Commission.

Dr. Fairbairn of Oxford is characterized as coming "of what Ian Maclaren calls a 'subtle and conscientious people.' . . Great on the Dick Bequest, on leaving examinations, and other Scotch phenomena, he evidently knew nothing of the conditions of success of English second-grade schools. . . He had little sympathy with the aspirations of teachers generally. . . He would, I suspect, disfranchise all teachers, partly because he believed them incompetent to vote at all, and partly because he thought them incapable of steering clear of the trammels of party politics." Of Mrs. Henry Sidgwick, Dr. Wormell said: "Mrs. Sidgwick is a Balfour, and has all the keenness of intellect and power of application of the Balfours. No member mastered the details of our information more thoroughly. I used to think years ago that I myself have been a hard worker in my time, but I shall never again make such pretensions, having seen the versatility of Mr. Bryce and the close application of Mrs. Sidgwick."

The pen-portraits of the other members of the Commission, who, unfortunately, are not so well known in this country, are equally lively.

It has been necessary for Professors James of Harvard, Ladd of Yale, Cattell of Columbia, and Baldwin of Princeton to write letters, admirable in tone, that are published in *Science* of November 8, in reply to an editorial that appeared in the current number of the *American Journal of Psychology*. The professors named truly characterize the editorial in question as extraordinary, because of its apparent desire to make all the psychological work now being carried on in America the tail of a single kite.

In the *Child-Study Monthly*, which Professor Krohn of the University of Illinois is conducting, an opportunity is given to bring together in one place the results of the work being carried on in this field all over the country. It is gratifying to know that the new journal has met with a cordial reception.

Dr. Stuart H. Rowe, for two years University Fellow in Education at Columbia College, has been appointed to an important position in the Minnesota State Normal School at Mankato. Dr. Rowe took the degree of doctor of philosophy at Jena last July, his dessertation being entitled: *Herbart's Ansichten von dem Zwecke des lateinischen und griechischen Unterrichtes.* Students of Herbart and secondary-school teachers, to say nothing of those who are both, will find it full of interesting material.

Advance in Education is the name of a new journal, edited by ex-Superintendent P. W. Search of Los Angeles. Its aim is "the conservation of the individual in mass education," and the exposition of the "essential principles of educational unity." The first number is both attractive in form and interesting in matter.

Secretary Frank A. Hill of the State Board of Education of Massachusetts has recently issued two very valuable circulars—one in the form of a letter of advice to a person about to become a teacher, and the other a statement and explanation of the conditions governing admission to the various normal-school courses. The latter bear a striking similarity to those adopted in New York State to govern admission to city training-schools.

An adjourned meeting of the Executive Committee of the National Educational Association was held at Atlanta, Ga., on October 26, but no decision as to the place of meeting in 1896 was arrived at. Boston, Buffalo, Los Angeles, Duluth, and Asbury Park are still under consideration. If it is finally decided to risk the long and expensive journey to the Pacific Coast in the year following the meeting at a point so far West as Denver, then Los Angeles will be chosen. If an Eastern point is selected, it will probably be Boston or Buffalo, and the choice between them will depend largely upon what concessions the railroads are willing to make. There is undoubtedly a strong feeling in the Middle West, the section whose wishes are entitled to the greatest consideration, in favor of meeting at Boston. The chances of Duluth have been greatly injured by the fact that, so far as expressed, the preference of the teachers in the Mississippi Valley is for an Eastern point. It is expected that the matter will be finally settled, just as this issue of the REVIEW goes to press, at a meeting to be held in Chicago on November 23.

The first issue of the *Deutsche Zeitschrift für Ausländisches Unterrichtswesen*, edited by Dr. J. Wychgram of Leipsic, commands confidence and respect. It is well printed, in Roman type, and is in octavo form, with a slightly larger page than that of the EDUCATIONAL REVIEW. Dr. Largiadèr of Basle writes of the educational system in Switzerland, and Professor Ehrhard describes the *École normale supérieure* of Paris. Co-education, with illustrations and arguments largely drawn from American experience, is the subject of an article by Professor Waetzoldt of Magdeburg, while Mr. Henry Holman contributes a rather dull paper on the present state of matters educational in England. They are evidently too mixed to be clearly set forth in one short article. The well-known director of the real-gymnasium at Altona, Dr. Schlee, begins a series of contributions on the new movements in education in North America, and includes a mention of the work of the National Educational Association and its Committee of Ten. A few shorter contributions and some forty pages of notes and book reviews make up this very interesting number. The list of collaborators, outside of Germany, includes Dreyfus-Brisac, Pinloche, and Thamin from France; Burgerstein from Austria; Dominicis, Fornelli, and Mosso from Italy; Hoffman from Belgium; Schmid from Russia; Salomon from Sweden; Findlay and Sadler from England, and Butler, Hall, and Thurber from the United States.

Unusually large and interesting meetings of the State Teachers' Associations of Indiana, Illinois, Minnesota, Iowa, Nebraska, and Kansas are expected during the holidays. In Indiana, Illinois, and Kansas the meetings are held on December 26 and the following days. In Minnesota, Iowa, and Nebraska the teachers do not assemble until December 31. The programme of the Illinois meeting has been issued for some time, and includes the topics of manual training, correlation, and child-study. Among the speakers are Superintendents Powell of Washington and Gilbert of St. Paul, Professor Bryan of the University of Indiana, Professor Shaw of the University of the City of New York, and Professor Moulton of the University of Chicago. A more than ordinarily profitable meeting is looked for.

The time of the Association of Colleges and Preparatory Schools in the Middle States and Maryland, which meets at Lafayette College, Easton, Pa., on the Friday and Saturday following Thanksgiving Day, will be divided among these topics: The aim and method of college work in French and German; the significance of Herbart for secondary and higher education; and the teaching of the classics—is the humanistic being sacrificed to the linguistic?

That teacher who wishes to keep fully posted as to the new literature, and to learn of the worth of new books from carefully written and scholarly reviews, has the means provided for him in *The Bookman*. During the six months of its existence this magazine has won for itself a distinct place, and the service that it renders is not to be lightly estimated.

The desirability of establishing an association of the teachers of modern languages in the Middle West has been keenly felt for some time, for many teachers, outside of the Eastern States, have found it impossible to attend the meetings of the Modern Language Association, which are generally held in the East. A movement was therefore started last spring by the modern language teachers in the universities of Kansas, Nebraska, and Iowa, heartily supported by those of the University of Chicago, for the organization of a modern language association in the West. On June 28 a preliminary meeting of representatives of various institutions in the Central and Western States was held in Chicago. It was there agreed that conflict with the Modern Language Association should be avoided, and that the annual meeting be so arranged as to allow members to attend both associations. The name of the new organization is to be Central Modern Language Conference. The officers appointed to serve until the first regular convention are: President, W. H. Carruth, University of Kansas; secretary and treasurer, Professor H. Schmidt Wartenberg, University of Chicago. The first meeting of the new association will be held at the University of Chicago December 30–January 1. The Conference will meet annually at such places and at such times as may be determined upon at a preceding meeting. Any person recommended by the executive committee may become a member of the Conference by the payment of two dollars. Titles of papers to be read at the first meeting should be sent to Professor G. E. Karsten, Bloomington, Ind., as early as convenient.

CHARTER MEMBERS OF THE EDUCATIONAL PRESS ASSOCIATION OF AMERICA.

Paper.	*Post Office.*
American Teacher,	Boston, Mass.
American School Board Journal,	Milwaukee, Wis.
Colorado School Journal,	Denver, Colo.
Educational Review,	New York, N. Y.
Education,	Boston, Mass.
Iowa Normal Monthly,	Dubuque, Ia.
Michigan Moderator,	Lansing, Mich.
New England Journal of Education,	Boston, Mass.
Northwestern Journal of Education,	Lincoln, Neb.
Ohio Educational Monthly,	Columbus, O.
Primary Education,	Boston, Mass.
Primary School,	New York, N. Y.
Popular Educator,	Boston, Mass.
Public School Journal,	Bloomington, Ill.
Pennsylvania School Journal,	Lancaster, Pa.
School Review,	Hamilton, N. Y.
School Bulletin,	Syracuse, N. Y.
School Education,	Minneapolis, Minn.
School Journal,	New York, N. Y.
Teachers Institute,	New York, N. Y.
Texas School Journal,	Austin, Tex.
Western School Journal,	Topeka, Kan.

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